

FACILITY ASSESSMENT FOR Chevy Chase Library



Contract No. 1082489
Sheladia & Associates Project No. 5522.004

Final Report

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Chevy Chase Library - Facility Assessment

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INTRODUCTION & EXECUTIVE SUMMARY

Introduction

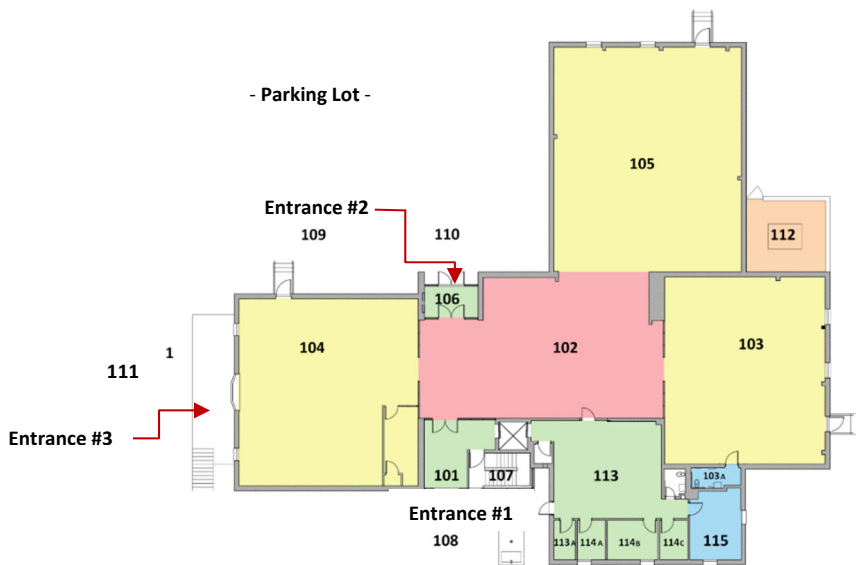
Sheladia & Associates, Inc., (Sheladia) was retained by Montgomery County's Department of General Services, Division of Building Design and Construction, to conduct a Facility Assessment of the Chevy Chase Library. The Facility Assessment is necessary to help determine the Program of Requirements for the Library Refurbishment. The assessment is based on a visual inspection of the facility to determine the condition of the building, structural, mechanical, electrical and fire prevention systems, ADA and hazardous materials issues, and exterior site conditions.

The assessment will provide a description of the library and layout and the condition of the building, systems and grounds. Recommendations are made for repairs or replacements of building components and systems required immediately, needed in the near term (18-36 months), and in the extended term (36-72 months). A detailed Order of magnitude Cost Estimate is provided for each time frame along with a Summary in accordance with the Montgomery County CIP format. The Chevy Chase Library Facility Assessment provides the necessary information to make informed decisions about the refurbishment of the Library.

Executive Summary

Libraries are important cornerstones of a healthy community and will remain critical centers in the community they serve. The Chevy Chase Library, located at 8005 Connecticut Ave, Chevy Chase, MD 20815 is one such resource that's well utilized by its local residents.

In addressing the current Library and user needs, Sheladia & Associates, Inc., (Sheladia) was retained by the Montgomery County's Department of General Services, Division of Building Design and Construction, to conduct a Facility Assessment of the Chevy Chase Library. The purpose of the facility assessment is to determine the Program of Requirements for the Library Refurbishment. The Survey performed by Sheladia, was limited to reviewing the original building drawings, inspecting the existing systems and building, and identifying any building features or systems that need repair or replacement over the short term, near future, and long term.



Legend

- 101. Entrance Vestibule – Front
- 102. Library Lobby & Reception
- 103. Children's Reference
- 104. Teen's Reference
- 105. Adult's Reference
- 106. Entrance Vestibule – Rear
- 107. Stair
- 108. Raised podium – Front
- 109. Paved Walkway – Rear
- 110. Rear Courtyard
- 111. Library Parking
- 112. Cooling tower – Rear
- 113. Staff office
- 113A. Restroom
- 114A. Office #1
- 114B. Office #2
- 114C. Office #3
- 115. Staff Lounge

MAIN LEVEL – FLOOR PLAN

Scale: NTS



Legend

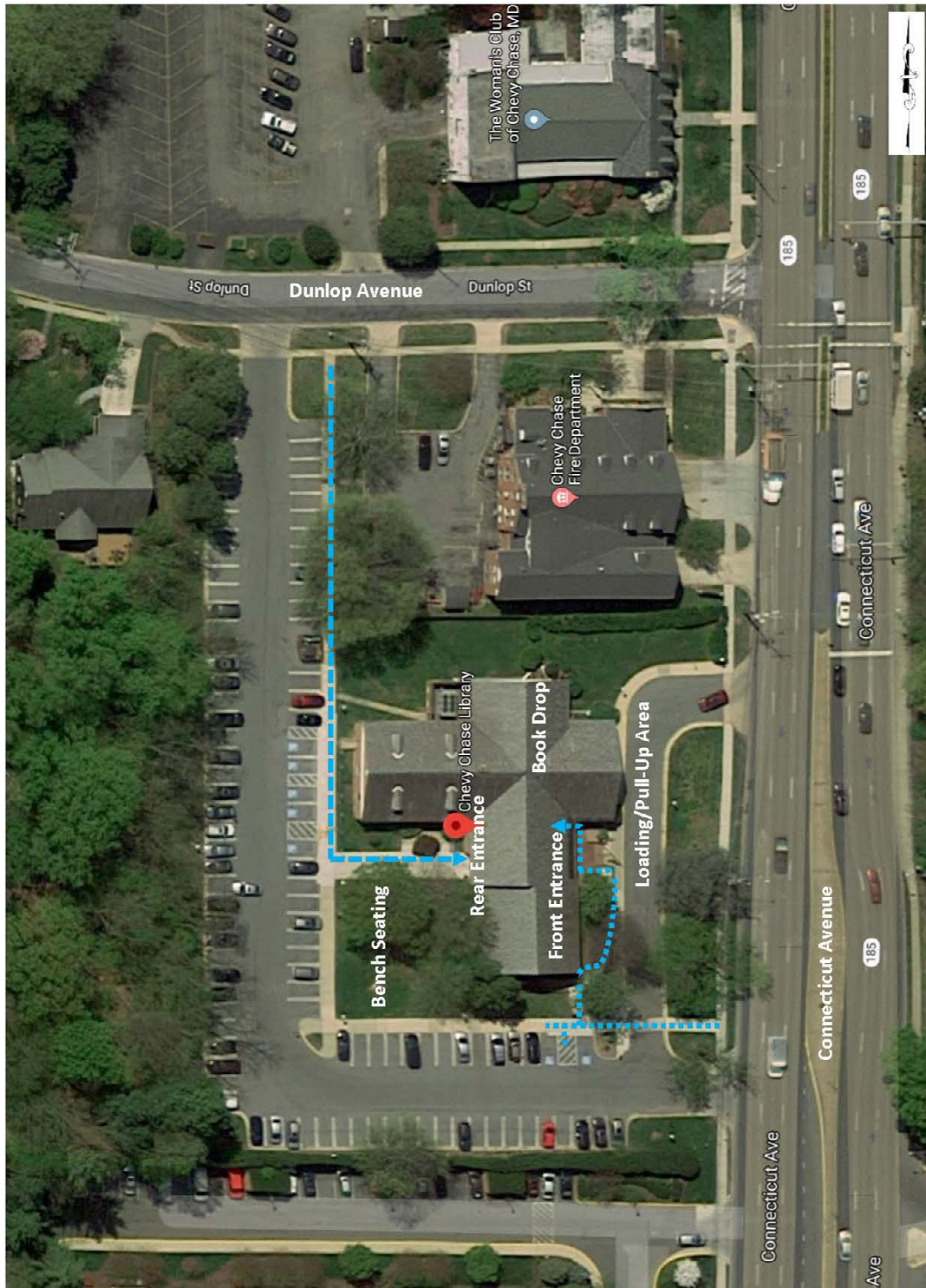
- G101. Corridor
- G102. Restroom - Female
- G103. Restroom - Male
- G104. Multi-purpose Room
- G105. Meeting Room
- G106. Library Storage Room
- G107. Elevator Closet
- G108. Mechanical Equipment Room
- G109. Patio
- G110. Unexcavated

LOWER LEVEL – FLOOR PLAN

Scale: NTS

CHEVY CHASE LIBRARY – AERIAL MAP

8005 Connecticut Avenue, Chevy Chase, MD 20815



Current State

Originally constructed in 1965, the current facility consists of two floor levels – the Library which is located on the Main floor and a Lower floor (i.e., Basement) which houses the following spaces: restrooms, mechanical and elevator room, storage, meeting, and a multi-purpose room. The gross areas for the two floors are: Main floor 10,452 gross sq.ft, and Lower floor 6,105 gross sq.ft.

The existing exterior of the building is brick on CMU with a slate roof, the interior is finished by gypsum wall board interior partitions. There are three building entrances leading into the Library's Main level: entrance #1, on the building's West side, i.e., front façade facing Connecticut Avenue, entrance #2, located at the building's East side, i.e., rear façade, and entrance #3 is through the area way for after-hours events. The East entrance is accessed through the site entrance from Dunlop Street or through Connecticut Avenue by driving around the Library building.

There are 101 parking spaces available, out of which 7 are assigned for ADA parking (two of which are van accessible). The Lower level is accessed either through a flight of stairs or an elevator, located off the Main entrance vestibule, on the Connecticut Avenue side of the building.

The County also retained the services of the following Consultants to evaluate the current facility. Their findings and recommendations, are referenced in this report. The detailed reports are also attached to this Facility Assessment in the below referenced appendices:

- ADA Survey, Universal Designers & Consultants, Inc. (Appendix 2)
- Passenger Elevator Report, Van Dausen & Associates, Inc. (Appendix 3)
- Building Enclosure Evaluation, Gale Associates, Inc. (Appendix 4)
- Hazmat Report, Apex Companies, LLC (Appendix 5)

Renovation Work

The following renovations were performed to the original building during the past years between 1990 and 2009:

- West building entrance and lobby – work included reconfiguration of interior stair, relocation of entrance door, adding an elevator, new West Side entrance door and a new book drop-off area.
- Library – work included reconfiguration of Children's, Teen's, Reference and Lounge areas and adding a new Quiet room, Tutor room, Server room, Staff restroom, a small sitting area and a reception desk.
- Library Office – work included reconfiguration of office spaces, break room and pantry, removal of storage closet, dumbwaiter space and Periodicals room.
- Lower level – work included creating a storage room and a resource room, adding a room in the mechanical equipment room. A Multi-purpose room was added with a sink and built-in millwork.
- Building exterior – major work included an ADA accessible ramp to the West façade and exterior egress doors to the Children, Adult and Teen areas.

Observations

The building layout, condition of the building, systems and grounds, and ADA compliance were observed and evaluated by our team. The issues and respective recommendations identified are summarized below for each Building System:

A. Architectural Systems

In general the building exterior requires a number of repairs and replacements. The major issues include: replacing the west side exterior entrance steps & landing, replacing the entrance vestibule storefront system, replacing the ADA ramp and landing, replacing the exterior windows and doors, repairing the slate roof and wood trim, replacing existing rain leaders, repointing brick, providing wall coping for the exposed brick parapet walls, and providing new signage for the entire facility. In general, the following were observed:

- The main level interior of the library will require a redesign of the layout as part of the Refurbishment as well as some repairs and replacements to meet the needs of Montgomery County Public Libraries. These include new paint, carpet, LED lighting, repairs of drywall and acoustical ceiling tiles, new glazed partitions for a group study room and possibly relocating the children's area.
- Signs of moisture presence was evident in multiple locations on the Main level of the building, potentially caused as a result of damages due to the waterproofing system in the roof. At a minimum, roofing repairs are warranted in the areas close to locations identified with traces of water leakage through the roof.

Evidence of water seepage through the walls at Lower level was found at multiple locations. Negative side basement waterproofing is proposed as a repair for walls of the Mechanical Equipment room. External placement of waterproofing membrane is recommended for other affected basement walls. When performing the exterior excavation for waterproofing, there are four trees on the building East and West façades which should be removed, and the affected areas re-landscaped. Tile foundation drains provided on the East and West side of the building are most likely dysfunctional and need to be replaced with perforated drainpipe.

Wall footings at multiple locations may not have adequate frost depth. Regrading may be needed along portions of the building enclosure.

B. Structural Systems

The roof framing system and floor integrity of Library was observed during the field visit and some issues were identified. A continuous gap is visible between the concrete stair landing at the East side of the building providing access to the emergency exit door of the "Adults and Young Adults Room", which needs to be caulked all around the gap. There is concern regarding fireproofing requirement of the Mechanical Equipment Room floor/ceiling where pipe penetrations were observed without proper fireproofing seal around the openings. It is also recommended to test and verify the functionality of the ground water sump pump and to replace the sump cover.

C. Mechanical Systems

The library's current mechanical equipment dates back to the 1965 renovation with certain components remaining from the building's original construction. The site survey confirmed these systems display noticeable signs of aging and are near or past their expected service life. This equipment includes a 28 year old central boiler located in the basement, two deteriorating air handling units and numerous unit ventilators/fan coil units spread throughout the building's interior. In addition, the mechanical systems utilize two circulating pumps that both displayed signs of corrosion and excessive aging. These components should be replaced immediately to support the proper operation of the existing system. However, this will not address the humidity issues in the basement and temperature control issues throughout the building. It is recommended that a new, more modern HVAC system be installed that supports simultaneous heating and cooling functionality. This solution would be more energy efficient and will provide better zoning and temperature control for the building's occupants. The pneumatic temperature controls should also be upgraded to digital for ease of use and better accuracy.

D. Plumbing and Fire Protection Systems

The plumbing and fire protection system serving the Chevy Chase Library was evaluated for condition, code compliance, and efficiency. With the majority of existing plumbing systems original to the structure, especially the domestic water distribution and sanitary waste systems, there are aspects which are in need of replacement and upgrade.

The expected service life of the distribution water piping has been reached along with the remaining original fixtures within the facility. Additionally there are some inefficiencies and problems with the configuration of the hot water system, including low distribution temperature and uninsulated pipe segments. Other components of the plumbing systems which have been evaluated within this report include ADA and code compliance issues as well as limited sprinkler system coverage. The existing structure only has a partial sprinkler system supplied off the incoming domestic water line. This sprinkler coverage is only within the mechanical and storage rooms of the lower level. While functional and in good working order, the library plumbing and fire protection systems are reaching the end of the useful life and would need major upgrades to fully comply with today's codes and energy efficiency requirements.

E. Electrical Systems

The electrical system is comprised of the electrical distribution equipment, interior and exterior lighting, fire alarm system, wiring devices and their associated wiring and components appear to be original to the building. There are no documentations of any recent renovations except in one area where it appears that new lighting and wiring devices have been provided per the revised room function and configuration. Power, lighting and fire alarm system appears to be in good operational condition and there are no known current electrical issues. Considering the age and the exceeded life expectancy of most of the equipment, devices and associated components and wiring in the building, we recommend that they should be replaced within the 18-36 month period.

We recommend that the electrical system be evaluated by a certified testing agency, to determine faulty components and electrical connections, ensure safety, proper and efficient operation, and to avoid putting the facility at risk. Besides the age and condition, the building's

energy consumption with its associated cost is also a critical factor to consider. The proper use of sustainable technology in lighting has a potential to reduce the energy demand in this type of a facility.

F. Fire protection

See section 'D. Plumbing and Fire Protection Systems' listed above.

G. Site Conditions

The majority of the building wall mounted and all of the pole mounted fixtures appear to be original to the building. We recommend they be replaced with more efficient LED exterior fixtures. The parking lot area is in fair condition but not all of the handicap parking are fully Americans with Disabilities Act (ADA) compliant. The noncompliant parking spaces require upgrading to meet ADA compliance. The asphalt pavement was observed to be cracked and worn in places. One localized depression was found. Resurfacing is recommended. The sidewalk is worn out in few places and needs to be repaired and two sidewalk-ramps are not ADA compliant. The short retaining wall at the Northwest corner of the building (downside of the handicapped ramp) are in very poor condition and it needs to be replaced. The brick paved entrance on the building front is in poor condition and it needs to be replaced.

H. Special Areas

The existing restrooms needs to be totally renovated to meet ADA code. Toilet fixtures, partitions, flooring and other accessories are in working condition but don't meet code and need to be replaced. Some accessories require re-securing in place due to lose attachments, i.e., toilet seat cover dispenser, WC escutcheon loose, etc. A number of ADA deficiencies were noticed and areas for improvement are recommended by our team as well as by the facility wide ADA survey. Additionally, the restrooms seem isolated from the rest of the Library, and it is recommended to install security cameras at the Lower Level.

I. Miscellaneous Components – Signage and Display Areas

The existing signage graphics and display areas of the Library are poor. These components are unplanned and inconsistent throughout the facility. Signage graphics are temporary in nature and are letter size printouts affixed to wall surfaces. There is no consistent room identification numbers or signage. Most display components currently obstruct code required ADA accessibility clearances, while others obstruct visibility into the Library or public areas. Exterior building signage is outdated and none visible from the road. We recommend replacing the existing signage and building name with a new county standard monument sign as well as new exterior and interior signage.

Timeline for Implementation

An aggressive repair or replacement program needs to be implemented to address the recommended solutions for the identified issues. Three timeline categories are identified to complete the repair or replacement work:

1.	Immediate	Now	Oct. 2019
2.	Necessary	18 to 36 months	March 2021 to Sept. 2022
3.	Extended	36 to 72 months	Sept. 2022 to Sept. 2028

Cost Estimate

The following page shows a summary of the Order of Magnitude Cost Estimate by building system for the 3 time horizons. These cost estimates are based on the project team's knowledge of the local Washington Metropolitan construction market. The opinions rendered by Sheladia and other team members of probable costs are based upon an extrapolation of repair and replacement quantities from the survey data gathered from representative sample projects of similar type, use and visual inspections. Our team conducted rudimentary quantity take-offs and applied unit price, price per linear feet or square feet, and lump sum methodology to arrive at cost estimates. Unit prices are subject to market fluctuations and should only be used as a guide for budgeting purposes.

The cost estimates for each building system are totaled and general conditions, overhead and profit, and bonds and insurance are added in accordance with Montgomery County's CIP methodology. The subtotal Cost Present Value is calculated for input into the Chevy Chase Library Refurbishment CIP. Sheladia recommends that Montgomery County incorporate the Immediate and Needed building system repairs and replacement costs into the Library Refurbishment at a Total Cost Present Value of \$3,274,795.

The detailed OM Cost Estimated by line item is included in **Appendix 1, Cost Estimate**.

Chevy Chase Library - Facility Assessment

CHEVY CHASE LIBRARY - FACILITY ASSESSMENT									
ORDER OF MAGNITUDE (OM) COST ESTIMATE SUMMARY									
Date: 10/30/2019									
				Cost Per Assessment Stage					
				(\$)					
COST SUMMARY				Immediate Now Oct, 2019	Necessary 18 to 36 months March, 2021 - Sept, 2022	Extended 36 to 72 months Sept, 2022 - Sept, 2028	Total		
TOTAL ARCHITECTURAL SYSTEM				\$ 1,186,512	\$ 196,694	\$ 86,360	\$	1,469,566	
TOTAL STRUCTURAL SYSTEM				\$ 28,780	\$ -	\$ -	\$	28,780	
TOTAL MECHANICAL SYSTEM				\$ 686,800	\$ 21,000	\$ -	\$	707,800	
TOTAL PLUMBING SYSTEM				\$ 164,470	\$ 136,700	\$ -	\$	301,170	
TOTAL ELECTRICAL SYSTEM				\$ 206,110	\$ -	\$ 118,050	\$	324,160	
TOTAL FIRE PREVENTION SYSTEM				\$ 67,975	\$ -	\$ 97,500	\$	165,475	
TOTAL SITE CONDITIONS				\$ 236,902	\$ -	\$ -	\$	236,902	
TOTAL SPECIAL AREAS				\$ 86,209	\$ -	\$ -	\$	86,209	
TOTAL MISCELLANEOUS				\$ 88,800	\$ -	\$ -	\$	88,800	
Subtotal				\$ 2,752,558	\$ 354,394	\$ 301,910	\$	3,408,862	
General Conditions				\$ 220,205	\$ 28,352	\$ 24,153	\$	272,709	
Subtotal				\$ 2,972,763	\$ 382,746	\$ 326,063	\$	3,681,571	
OH + P				\$ 237,821	\$ 30,620	\$ 26,085	\$	294,526	
Subtotal				\$ 3,210,584	\$ 413,365	\$ 352,148	\$	3,976,097	
Bonds and Insurance				\$ 64,212	\$ 8,267	\$ 7,043	\$	79,522	
Subtotal - Cost Present Value				\$ 3,274,795	\$ 421,632	\$ 359,191	\$	4,055,619	
Escalation 3.5%/ yr *				\$ 324,368	\$ 41,763	\$ 35,578	\$	401,709	
Subtotal - Base CCAP				\$ 3,599,164	\$ 463,395	\$ 394,769	\$	4,457,328	
Design Contingency				\$ 359,916	\$ 46,340	\$ 39,477	\$	445,733	
Designed CCAP Total				\$ 3,959,080	\$ 509,735	\$ 434,245	\$	4,903,060	
TOTAL FULLY LOADED COSTS				\$ 3,959,080	\$ 509,735	\$ 434,245	\$	4,903,060	
* From Oct, 2019 to Midpoint of Construction June 1, 2022									
Subtotal - Cost Present Value				\$ 3,274,795	\$ 421,632	\$ 359,191	\$	4,055,619	
RECOMMENDATION: IMMEDIATE + NECESSARY				\$ 3,274,795	\$ 421,632	\$	\$	3,696,428	

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Building Data

Building name: Chevy Chase Library

Location: 8005 Connecticut Ave, Chevy Chase, MD 20815

Zoning Classification: R-90, Residential

Use Group: Assembly A-3, (IBC 2015, Section 303.4)

Occupant load: 256

Net usable floor area: 11,965 sq.ft

Gross floor area: 16,557 sq.ft

Building age / date constructed: 54 yrs / 1965

Codes in force when building was constructed: 1965 BOCA, Original Building reference code.
(Note: these code years are estimated based on known information)

Codes in force when the building was renovated in 2009:

2007 Maryland Building Performance Standards

2006 editions of the International Building Code (IBC)

2006 International Energy Conservation Code (IECC).

(Note: these code years are estimated based on known information)

A light renovation of the Library was done in 2009 which included the following:

- 1). Repainted the Building, 2). Added a new circulation desk, 3). Renovated the bathrooms,
- 4). Added a new family restroom and 5). Re-carpeted the interior.

Historical status: Building is not a historical landmark.

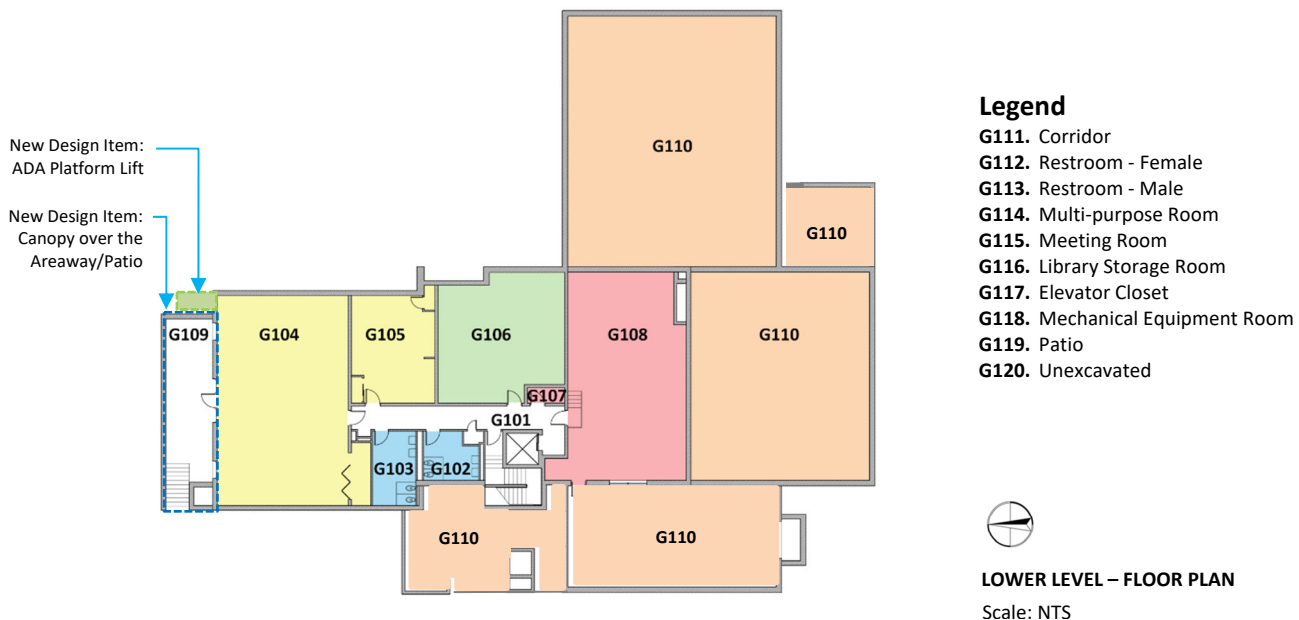
Wetlands/Stormwater Management: Building is not near a body of water or in a wetland.

Number of stories: Main Level (First Floor) and Lower Level (Basement)

Fire Department access: Access from Main Level

Building Systems

The Chevy Chase Library Building has two floor levels: Main Level and Lower Level. The provided key plans are indicative of the current Library space usage. This Facility Assessment report examines the conditions of architectural elements, building systems and their major components which are evaluated per floor level and presented on a space-by-space basis in a tabular form, when applicable. Below are simplified floor plans of the Library:



A. Architectural Systems

Listed below is a summary of the existing Architectural Systems. Refer to image tabulation:

- **Appendix 7, Architectural Systems: Image Tabulation**

For detailed field observations and recommendations refer to the attached Appendices:

- **Appendix 8, Building Exterior: Image Tabulation** (expanded list of Architectural Systems tabulation: organized per exterior façade basis).
- Appendix 9, Building Interior: Image Tabulation** (expanded list of Architectural Systems tabulation: organized per room by room basis).

1. Roof

- Type of roof: Slate shingle roof - see *Appendix 7, #7-A, A1.1*.
 - As stated in the attached Gale Associate, Inc., (Gale) report in **Appendix 4** "The slate roof is in generally fair condition given its age".
- Approximate date last replaced: 1990.
- Present Conditions:
 - The roof is sloped approximately 7-inches per foot.
 - The roof consists of random-sized purple and green slate shingles. Isolated slate shingles were observed to be broken or displaced, mostly along roof edges. In general, the slate shingles appear to be in fair condition given their age.
 - EPDM repairs were observed at isolated valleys.
 - Peeling paint and isolated rot was noted throughout the wood dormers, fascia, and dental molding.
 - The gutter assemblies vary between built-in and hung assemblies. The gutters and downspouts appear to be in generally fair condition. Repair attempts were noted at a downspout on the East elevation.
 - Ponding of water on roof: no ponding of roof found.
- Stability:
 - There's concern regarding the stability of the roof framing structure due to potential rotting of the wood as evidence of roof leaking was observed in the ceiling and on the walls of the main floor of the library. Please refer to Items (1-k)-Roof framing member, (1-l)-Beam/truss bearing conditions and (1-m)-Water leakage for details.
- Material Strength:
 - There's concern regarding the potential loss of strength of wood structural elements in the roof due to rotting. Please refer to items (1-k)-Roof Framing, (1-l)-Beam/truss bearing conditions and (1-m)-Water leakage for details.
- Clogging of scuppers and other overflow mechanisms:
 - As stated in the Gale report "the gutters assemblies vary between built-in and hung assemblies. The gutters and downspouts appear to be in generally fair condition. Repair attempts were noted at a downspout on the East elevation".
- Adequacy of roof top unit /skylight/hatch support framing:
 - No issues were observed for the existing skylight framing.
- Exposed steel above the roof to be galvanized: N/A.
- Joist bridging:
 - Refer to the item (1-k)-Roof Framing, below.

- j. Vertical /horizontal bridging of trusses:
 - Refer to the item (1-k)-Roof Framing.
- k. Roof framing member (beams, girders, slab etc.) conditions such as cracks, spalling, excessive deflection etc.:
 - Based on existing plans of the building, framing members of the roof truss are wood elements and galvanized metal connector plates. As it was explained before, the building survey did not include assessment of structural element in the attic due to limited accessibility. However, as it's shown in *Appendix 7, #7-A, A1.1 & A1.2*, the visible portions of the facias and rakes show signs of rotting at isolated locations. Referring to item (1-m)-Water leakage below and considering the evidence of water leakage from the roof on ceiling tiles and interior walls, there's a high potential for the roof framing wood members to suffer from the same level of rotting at leakage areas.
- l. Beam/truss bearing conditions:
 - Refer to items (1-k)-Roof Framing member and (1-m)-Water leakage. With the same concern, there's potential for the wood members of the truss to have experienced decay and subsequently have lost part of their shear bearing capacity at the ends. This condition can be a noteworthy concern specifically at roof edges, where evidence of water leaking from the roof could be found on interior walls, as shown in *Appendix 7, #7-A, A1.3 image*.
- m. Water leakage:
 - As mentioned previously in items (1-k)-Roof Framing member and (1-l)-Beam/truss bearing conditions, signs of the presence of moisture was evident in multiple locations on the main floor of the building. Interior observations were noted which show signs of moisture on the inside face of perimeter walls potentially as a result of damages waterproofing system in the roof. Other areas showed stained ceiling tiles potentially because of water leaking from the roof. Also, some ceiling damage was visible in the 'Reference Room' as seen on *Appendix 7, #7-A, A1.4 image*, which may have been caused by the presence of moisture. See items (1-k)-Roof Framing member and (1-l)-Beam/truss bearing conditions concerning these pictures.
- n. Vibration due to roof mounted equipment:
 - No roof mounted equipment was observed during the field visit.
- o. Recommendations for rehabilitation, remediation, upgrading or repair of the roofing system:

Items (k) & (l):	Considering the concern mentioned in item (1-k)-Roof Framing member and (1-l)-Beam/truss bearing conditions, it is recommended that the ceiling tiles at locations of leakage identified in item (m) be removed now, and for a cost of \$25,000 the quality of all structural wood of the roofing frame be inspected to ensure the wood is not rotten and no section loss or reduction of strength is caused by it.
Item (m):	At a minimum, roofing repairs are warranted in the areas close to locations identified in item (1-m)-Water leakage. Rotten rakes and facias and soffits shall be removed and replaced.

 - Isolated slate repairs and sheet metal repairs to include edges and valleys, will likely be required to maintain the roof in serviceable condition.

- Time Frame – Immediate
- Cost Estimate - \$400,000

- The wood trim throughout, including the fascia, dormers, doors, windows, and dental molding, are in generally fair to poor condition. Consideration should be given to scraping, priming, and painting all wood trim, and a contingency for replacing isolated rotted areas should be carried.
 - Time Frame – Immediate
 - Cost Estimate - \$17,400
 - Time Frame – Extended
 - Cost Estimate - \$40,000

- As an alternate, the Gale report recommends replacing the roof (slate tiles). In lieu of a slate roof, a metal roof can be substituted.
 - Time Frame – Extended
 - Cost Estimate - \$800,000 (Slate roof); \$720,000 (metal)

2. Foundation / Waterproofing / Drainage

- a. Type of wall and membrane system: Parge coat.
- b. Approximate date last replaced: 1965.
- c. Effects on the foundation from adjoining property, buildings and facilities: N/A.
- d. Variations of hydrostatic pressure and surcharge on retaining walls: N/A.
- e. Back fill material and water proofing of retaining walls: N/A.
- f. Blocked weep Holes: No blocked weep holes were identified.
- g. Cracks on exterior walls due to lack of control joints and concentrated loads: No cracks were detected during the inspection of the exterior walls.
- h. Present conditions:
 - The exterior face of the below-grade perimeter walls appears to have a parge coat with dampproofing. No waterproofing membranes were observed.
 - On the Northwest elevation correlating with the deteriorated interior meeting room wall, Gale noted that the entrance ramp and the garden wall prevent stormwater from draining.
 - The Lower level Multi-purpose room's exposed CMU walls exhibited peeling paint and efflorescence, primarily on the East and West elevations (at walls below grade) – see *Appendix 7: #7-A, A2.1*.
 - The North facing wall, which opens onto an exterior courtyard, appears to be in generally good condition.
 - West side of the building, downspout not expended properly into the drain.
 - Northeast corner of the building, settled profiled of the grade around down spout drain.
 - Mechanical and Equipment Room, peeling paint at interior face of East basement wall.
- i. Proper drainage of water from the building:
 - At the West building location the downspout is not properly extended into its designated drain. This condition can result in running water at the surface, which

will subsequently increase the potential for damage to the underground elements of the structure - see *Appendix 7: #7-A, A2.2*.

- At the Northeast corner of the building the ground profile adjacent to downspout drain suggests that the drain may be clogged. As a result, it may overflow during wet weather condition and it may not function properly. There is also the possibility that the scupper is clogged, and water is overflowed from the roof directly to the ground around the existing drain. The overflow water increases the demand on the foundation drainage system. See *Appendix 7: #7-A, A2.3*.
 - Overall the building does not have a perimeter drainage system.
- j. Water seepage through basement walls:
- Evidence of water seepage through the walls at the basement level was found at locations shown in *Appendix 7: #7-A, images A2.4 through A2.9*, in the form of paint peeling from the masonry or concrete walls.
- k. Cracks on floor due to differential settlement of footings: None.
- l. Frost depth:
- Upon review of the existing drawings of the building, the depth of the bottom of the wall footings of the "Reference Room" and "Adults and Young Adults Room" is defined as 2'-2" or 1'-0" below original grade. This dimension, however, does not provide adequate frost depth of 30" per International Building Code 2015 as amended by Montgomery County.
- m. Water ponding at the building perimeter:
- Water was observed to be ponding at the West side entrance perimeter due to insufficient drainage.
 - The brick paving was observed to be wet and slippery with moss growth on the brick paved surfaces, and metal handrails & posts were observed to be rusted and in poor condition.
- n. Recommendations for rehabilitation, remediation, upgrading or repair of the foundation/waterproofing system including but not limited to drainage, perimeter slope, height adjustments and modifications, insulation, flashing types/adjustments, and membrane for their intended use:
- Downspout at West side of the: Extend downspout properly into its designated drain. All downspout drains to be checked for potential clogging during heavy rainfall only, and if clogged to be repaired accordingly. Recommend replacing all downspouts / rain leaders as part of this renovation effort.
 - Time Frame – Immediate
 - Cost Estimate - \$500
 - Multi-Purpose, Mechanical and Equipment Room: Remove peeled paint from the existing concrete wall and prepare the surface per manufacturer's recommendation. Provide three coats of CrystalFlex 2K SuperStrong negative side basement waterproofing, or equivalent product on the inside face of the concrete walls of the rooms where water seepage was detected. Paint the final product with color matching the existing wall color considering the manufacturer's recommendations.
 - Time Frame – Immediate
 - Cost Estimate - \$75,000

- Re-grading the landscaped areas and providing provisions for drainage on the Northwest side will likely mitigate the moisture intrusion being experienced.
 - Time Frame – Immediate
 - Cost Estimate - \$25,000
- As an alternate, Gale recommends to excavate and reinstall a waterproofing membrane around the entire perimeter
 - Time Frame – Immediate
 - Cost Estimate - \$200,000
- To perform the exterior waterproofing excavations, the existing exterior paving closer to the building perimeter should be removed and replaced. Cost for this is.
 - Time Frame – Immediate
 - Cost Estimate - \$20,800
- New exterior canopy over the Areaway/Patio: As an alternate, we recommend to add a new exterior canopy over the existing Areaway. This would provide shade and divert the rainwater away from the paved area, making it more user friendly.
 - Time Frame – Immediate
 - Cost Estimate - \$2,400
- Replace the existing North side Areaway brick paving with new concrete tile paving and provide proper floor drainage. The estimated cost for this is \$8,075.
 - Time Frame – Immediate
 - Cost Estimate - \$8,075
- Insufficient Frostdepth at Perimeter of Adults Room and Reference Room. Recommend increasing the grade line adjacent to the building by as much as 6" to achieve 30" depth.
 - Time Frame – Immediate
 - Cost Estimate - \$6,250
- Perimeter excavation for waterproofing
 - Time Frame – Immediate
 - Cost Estimate - \$50,000
- Recommend cutting down existing champion trees near east and west facades and demolish landscape near east facade.
 - Time Frame – Immediate
 - Cost Estimate - \$6,600

3. Perimeter Skin

- a. Type of construction/materials: Brick Masonry, Glass storefront system.
- b. R-values: Gale accessed the attic to determine the existing insulation assemblies. The insulation consists of foil-faced batt insulation with an R-value of 19.
- c. Approximate date and extent of last paint/point/caulk work: 1990.

- d. Condition and quantity of caulking, mortar, and/or grout:
 - Staining and deteriorated mortar joints were noted in the screen wall on the South elevation – see *Appendix 7: #7-A, A3.1 image*, and the retaining wall on the North elevation – see *Appendix 7: #7-A, A3.2 image*.
- e. Present condition of exterior finish surface (brick, block, metal, wood, etc.):
 - The storefront system and glazed roof at the entrance vestibule on the West elevation is in generally poor condition. Gale noted deteriorated gypsum board and staining on the interior brick indicative of moisture intrusion – see *Appendix 7: #7-A, A3.3 image*.
 - The exterior brick masonry walls appear to be in generally good condition with no significant defects noted.
- f. Recommendations for rehabilitation, remediation, upgrading or repair of the perimeter skin for its intended use.
 - The storefront system and glazed roof at the West entrance vestibule is in generally poor condition and appears to be a source of moisture intrusion. Replacement of the storefront system and glazed roof is recommended as a part of this project. The design team recommends to redesign the main entrance by replacing the existing storefront entrance system with a new storefront system, and to replace the existing roof with a new standing seam metal roof..
 - Time Frame – Necessary
 - Cost Estimate - \$42,000
 - Installation of a sheet metal parapet cap and repointing repairs on the South screenwall to prevent further deterioration. Gale also recommends repointing the retaining wall on the North elevation.
 - Time Frame – Immediate
 - Cost Estimate - \$1,750
 - Repair west Façade sealants and caulking.
 - Time Frame – Immediate
 - Cost Estimate - \$6,000
 - Clean and prepare interior basement walls for new paint to replace peeling paint
 - Time Frame – Immediate
 - Cost Estimate - \$7,344

4. Exterior Glazing

- a. Total exterior glazing areas (windows & storefront) is approximately: 1050 sq.ft.
- b. Number of windows: 13 single pane windows.
- c. Number, type, and size of windows:
 - (4) Type A – 3'-4" x 5'-2" Wood Double Hung Single Pane.
 - (6) Type B – 3'-8" x 6'-6" Wood Double Hung Single Pane.
 - (2) Type C – 3'-0" x 5'-2" Wood Double Hung Single Pane.
 - (2) Type D – 3'-0" x 4'-1-1/4" Wood Double Hung Single Pane.
 - (1) Oriel Window – (2) 2'-2" x 5'-10" Wood Double Hung Single Pane,
 - (1) 2'-2" x 5'-10" Wood Fixed Single Pane.

- d. Frame system (wood, aluminum, mullion-less) and finish:
 - The existing windows are wood and painted white.
- e. Number of storefront systems: 2 storefront systems.
 - (1) East facade – 12'-4" x 11'-7".
 - (1) West façade vestibule – 25'-8" x 11'-7" and glazed roofing system.
- f. Approximate date last replaced/repared: 1990.
- g. Present Condition:
 - In general, the window systems appear to be in poor condition. Broken glazing, peeling paint, and isolated rot were noted throughout – see *Appendix 7: #7-A, A4 image*.
 - Exterior storefront systems appear to be in poor condition too.
- h. Recommendations for rehabilitation, remediation, upgrading or repair of exterior glazing for its intended use:
 - The design team recommends to replace the exterior windows.
 - Time Frame – Necessary
 - Cost Estimate - \$78,450

5. Interior Partitions

- a. Extent and type(s) of finish surface materials (paint, wall covering, wood pane, /masonry, tile, stone, etc.):
 - The following partition types were noticed - Main level has gypsum partitions and glazed partition systems. The Lower level has gypsum partitions and painted CMU walls.
- b. Type of paint (i.e. lead, oil-based, water-based, polymer):
 - Currently unknown. More investigation required.
- c. Approximate date and extent of last paint/point up/caulk work:
 - Currently unknown. More investigation required.
- d. Present condition:
 - The condition of the drywall was noted to be good throughout – see *Appendix 7: #7-A, A5 image*.
- e. Indoor air quality issue due to paint: None observed.
- f. Indicate all partition deficiencies in terms of type of walls, age, energy conservation, code-related issues, maintenance procedures and summary of repair costs over the last 5 years, etc.:
 - Currently unknown. More investigation required.
- g. Determine fire rating of all partitions and review above-ceiling condition of same to identify any breaches in separation assembly due to post-construction penetrations:
 - The existing original drawings do not indicate rated partition types or areas. However reviewing the original building plan wall composition and using the prescriptive fire rating types listed in the IBC 2015, chapter 7, table 721.1 (2), 3-1.3 the wall fire rating types were researched and included in **Appendix 6**. Additionally an above ceiling field observation was performed and no breaches were found.
 - Based on our observations the area questionable is the MALE restroom, which as noted before has a new ACT ceiling installed below the old drywall ceiling.
- h. Recommendations:

- Overall the entire facility requires new wall paint.
- Areas missing wall base requires replacement with new wall base.
 - Time Frame – Immediate
 - Cost Estimate - \$45,000
 - Time Frame: - Necessary
 - Cost Estimate: - \$1,875

6. Interior Glazing

- a. Interior glazing configuration: Storefront system
- b. Glazing area: 641 sq.ft. Approximately
- c. Frame system: Aluminum.
- d. Present condition:
 - Similar to the exterior, in the interior side of the building too, the window systems appear to be in poor condition. Broken glazing, peeling paint, and isolated rot were noted throughout.
 - The interior storefront systems are in poor condition and requires replacement – see *Appendix 7: #7-A, A6 image*.
- e. Recommendations:
 - Existing windows and sills require replacement with new as explained above.
 - The existing interior glazed partitions require replacing with new.
 - Time Frame – Immediate
 - Cost Estimate - \$14,500

7. Doors / Entranceways (exterior and interior)

- a. Type of doors and locations:
 - Aluminum framed glazed doors are available at the front and rear entrance to the Library – see *Appendix 7: #7-A, A7 image*.
- b. Size and configuration:
 - Overall door opening size is 6'-0" wide, double doors with sidelites, doors swing out in the direction of egress travel.
- c. Frame material: Aluminum.
- d. Quantity: Approximately (30) doors (exterior and interior) as follows:
 - Main level, exterior: Two (2) double and Five (5) single doors.
 - Main level, interior: Two (2) double and Ten (10) single doors.
 - Lower level, exterior: One (1) double door.
 - Lower level, interior: Ten (10) single doors.
- e. R-values (include assessment of weather stripping, threshold, door bottom, etc.):
 - R-value currently unknown, existing weather stripping visually looks sufficient but poor, threshold requires replacement, door bottom intact.
- f. Glass door:
 - 215 sq.ft. Approximately (Storefront entrance doors).
- g. Hardware components and door operation:
 - Manual push bar, door closure and other standard hardware components are available.
- h. Vestibules:

- Main entry vestibule facing Connecticut Ave entrance, and Rear entrance vestibule available at back of the Library.
 - i. Type of vestibules (pressurized / non-pressurized): Non-pressurized.
 - j. Floor surface characteristics (grade changes, material change, etc.):
 - Main vestibule has ceramic tile floor and an entry matt system.
 - An additional carpet type mat is placed close towards the entry door.
 - k. Age of doors, approximate date last replaced and last painted:
 - Currently unknown.
 - l. ADA compliance - Indicate all deficiencies in doors and entranceway in terms of ADA requirements, size, type of system, age, energy conservation, code-related issues, maintenance procedures and summary of repair costs over the last 5 years, availability of to match with existing etc.:
 - A facility wide ADA survey was performed by Universal Designers & Consultants, Inc., (UDC). UDC observed a number of doors, thresholds or clearances, which do not meet accessibility requirements. Refer to the attached Appendix 2 report for detailed information.
 - m. Review all openings in fire-rated partitions to determine that assembly has code-compliant labels and hardware (applies to opening assemblies that have been modified since initial construction):
 - See response to question 7-g - Hardware components and door operation above.
 - n. Present condition:
 - Acceptable but poor.
 - o. Recommendations for rehabilitation, remediation, upgrading or repair of the doors/entranceways for their intended use:
 - The design team recommends replacing the exterior doors as follows:
 - - East & West building entrances (2 double doors) – new storefront double doors
 - - West Stair entrance (1 door) - new glazed storefront egress door
 - - Staff Office (1 door) - new glazed egress door
 - - Main Level Egress doors (3 doors) – Solid egress doors with panic hardware
 - - Areaway (1 door) - new glazed egress door with sidelights
- Time Frame – Immediate
 - Cost Estimate - \$53,668
 - Time Frame – Necessary
 - Cost Estimate - \$39,200

8. Ceilings & Soffits (interior and exterior)

- a. Total ceiling/soffit area: 14,675 sq.ft.
- b. Type and locations (suspension system and tile/panel spec/material):
 - Type A: 2x4 Acoustic Ceiling Tile.
 - Type B: 2x2 Acoustic Ceiling Tile.
 - Type C: 1x1 Acoustic Ceiling Tile.
 - Type D: Gypsum.
 - Type E: Cement Board.
- c. Ceiling area, Type A: 2,637 sq.ft.
- d. Ceiling area, Type B: 951 sq.ft.

- e. Ceiling area, Type C: 7,188 sq.ft.
- f. Ceiling area, Type D: 1,650 sq.ft.
- g. Ceiling area, Type E: 39 sq.ft.
- h. Approximate date last replaced: 1990.
- i. Present condition:
 - The existing ceiling has a concealed grid system. Random and crudely cut ceiling tiles were observed. We recommend replacing the entire ceiling in the facility with an exposed grid ceiling system. In addition to the aesthetic appeal, this would create efficiency and easy ceiling repairs and maintenance – see *Appendix 7: #7-A, A8.1 and A8.2 images*.
 - In the Lower level, due to moisture presence the soffit paint was peeling.
- j. Recommendations:
 - Requires replacement with new exposed grid ceiling system.
 - Controlling the humidity levels on the Lower floor, and repainting the soffits would help resolve the issue.
 - Time Frame – Immediate
 - Cost Estimate - \$10,325
 - Time Frame – Extended
 - Cost Estimate - \$29,125

9. Flooring

- a. Total floor area: 12, 475 sq.ft.
- b. Floor substrate: Concrete slab.
- c. Types of finishes:
 - Type A: Sheet Vinyl Flooring - 892 sq.ft.
 - Type B: 2'x2' Rubber Tile Flooring - 2,215 sq.ft.
 - Type C: Carpet Tile - 7,007 sq.ft.
 - Type D: Rubber Stair Treads - 542 sq.ft.
 - Type E: Vinyl Tile - 1,333 sq.ft.
 - Type F: Bath Tile - 257 sq.ft.
 - Type G: Carpet - 229 sq.ft.
- d. Approximate date last replaced: 1990
- e. Present condition: Flooring condition was noticed to be poor throughout the facility – see *Appendix 7: #7-A, A9 image*.
 - Time Frame – Immediate
 - Cost Estimate - \$118,300
 - Time Frame – Extended
 - Cost Estimate - \$7,775

10. Stairs & Ramps

- a. Location and quantity of stairs:
 - 3 exterior egress stairs, 1 interior stair
- b. Width of stairs:
 - Interior Stair: 3'-0".

- Exterior Stair: 3'-0".
- Exterior Entry Stair: 12'-0", 6'-0".
- Areaway stair: 5'-0".
- c. Landing dimensions:
 - Interior Stair (2) 7'-11" x 3'-0", (1) 3'-0" x 3'-0".
- d. Stair Riser height:
 - 6-3/8", Typ.
- e. Ramp, ADA compliance:
 - A 3'-4" wide ramp is available.
 - A facility wide ADA survey was performed by Universal Designers & Consultants, Inc., (UDC). For the stairs and exterior ramp, UDC observed a number of noncompliant ADA items and recommended improvements for repair or replacement. Refer to the attached **Appendix 2** report for detailed information.
 - The current egress stair does not meet code compliance since it doesn't have an area of refuge. In case of emergency there is no second means of accessible egress from the Lower Level to the exterior of the building.
- f. Present condition:
 - The interior egress stair material finish conditions are poor – see *Appendix 7: #7-A, A10.1 image*.
 - There is currently no area of refuge within the rated stair well.
 - As noted in the UDC report, other ADA improvements are also required for the egress.
 - The West façade exterior entrance steps are in poor condition and should be replaced – see *Appendix 7: #7-A, A10.2 image*.
 - The exterior ramp is not fully ADA compliant – see *Appendix 7: #7-A, A10.3 image*.
 - There is no proper after-hours access for the community meetings, which is held in the Lower level, Multi-purpose room.
- g. Recommendations:
 - Provide a new area of refuge at lower level within the rated stairwell. As an alternate, the design team recommends providing an accessible exterior ADA Platform elevator to exit out from the Lower level to the Main level exterior. The cost for the elevator is estimated at \$25,000.
 - Replace the West entrance podium and steps, provide a new flag pole, Provide new handrails & posts, and replace the ADA ramp with new to meet code compliance.
 - Repair the West exterior accessible ramp as recommended in the Gale report to maintain serviceability.
 - Redesign the West egress stair to provide access during after-hours to the Lower level Multi-purpose room community activities, while locking down the rest of the Main and Lower level spaces in the facility.
 - Time Frame – Immediate
 - Cost Estimate - \$76,600

11. Elevator System

- a. Description of the existing elevator system – see *Appendix 7: #7-A, A11 image*.
 - Type of the existing elevator equipment: Hydraulic passenger elevator.
 - Number of elevator cab: One (1).
 - Size of elevator cab: 3'-4" wide x 7'-0" high.
 - Capacity of elevator cab: 2000lbs, class "A" passenger.
 - Rated Speed (fpm): 125
 - Floors served: Two (2) front openings (B, *1) and Rear opening (1R).
 - Age of the existing system: 1991.
- b. Appropriate and effectiveness of the existing system with building functions:
 - According to the Van Deusen & Associates, Inc., (VDA) Elevator report (see **Appendix 3**), "the existing elevator is a two speed unit. It has a side opening door and features a rear opening at the 'LR' landing, which according to the VDA report seems to be adequate for this facility".
- c. Condition of the system:
 - The VDA report states that the "elevator of this property is fairly maintained for the age and type of equipment currently installed".
- d. Condition of the equipment:
 - The report further states that the "installation featured quality components which are mostly still available and maintainable. The exception to the maintainable component is the elevator selector/positioning system, which is obsolete with most replacement parts unavailable".
 - This estimated costs are based on VDA's recommendation to replace a component in the elevator system which is obsolete and has some likelihood of failing, hence the relatively low cost estimate. Beyond this component it is VDA's opinion that the elevator has a remaining life of approximately 10 years.
- e. Condition of the cab / door / side panel / handrail finishes:
 - Based on the VDA report these conditions are 'Satisfactory'.
- f. Elevator control system and its effectiveness:
 - Based on the VDA report these conditions are 'Satisfactory'.
- g. ADA compliance:
 - According to the UDC, ADA survey (see **Appendix 2**) the "elevator car size is compliant per 2010 ADA Standards 407.4.1, as measured to the interior wall panels of the car. We recommend modifying or removing the grab bar panels at the car interior as, due to their atypical size, they effectively reduce the overall width of the elevator car to 61-1/2 inches, which is non-compliant".
 - UDC recommends "to provide a loop or other accessible type pull handle on the door to the emergency communication device".
- h. Approximate date last replaced: 1991.
- i. Life expectancy:
 - As stated above VDA states that the existing elevator has 10 yrs., of life expectancy, past the time horizon of this report.
- j. Safety issues:
 - Meets life safety compliance category ASME A-17.1 safety Code, according to the VDA report.

- k. Indicate all deficiencies in the existing elevator / escalator system in terms of capacity, equipment size and installation, type of system, ADA requirements, age, energy conservation, code-related issues, maintenance issues and procedures and summary of repair costs over the last 5 years, availability of spare parts etc.
 - The following itemized deficiencies are noted by VDA:
 - There is no maintenance control plan available in the elevator machine room.
 - There is no current maintenance check chart available in the elevator machine room.
 - There is no current oil loss log available in the machine room.
 - Elevator machine room should be cleaned of dirt and debris.
 - Selector cover on top of the car is not installed.
 - Elevator pit should be cleaned of dirt and debris.
 - l. Recommendations for rehabilitation, remediation, upgrading or repair of the elevator(s) / escalator(s) for their intended use.
 - The following recommendations are noted by VDA:
 - The remedial maintenance and repair work noted above should be covered under the existing preventive maintenance agreement and should be resolved at no charge to Ownership.
 - Forward a copy of the 'Itemized Deficiencies' section of the VDA report to the facility maintenance provider, advising them to remedy the conditions covered under their maintenance agreement within sixty (60) days of receipt.
- Time Frame – Necessary
 - Cost Estimate - \$35,169

12. Potential Environmental & Hazardous Materials

- a. Investigate for the presence of asbestos and/or lead etc.
 - i) Indicate suspicion of asbestos and/or lead containing products, mercury, PCBs etc. and recommend professional investigation:
 - The presence of Asbestos, Lead, Mercury and PCBs were found by Apex Companies, LLC (Apex), detailed information is available in **Appendix 5**.
 - Analytical results confirmed the following Asbestos containing materials (ACM):

Beige window caulking on exterior of windows

Yellow and black residual carpet mastic located throughout the 1st Floor

Black mastic associated with grey floor tile located in the lower level meeting room and corridor.

Black mastic associated with Beige 12"x12" floor tile in the lower level elevator machine room.

Black seam sealant on fiberglass pipe insulation in the lower level corridor and meeting room.

Black mastic associated with Pink/Beige 12"x12" floor tile in the 1st Floor staff kitchen.

Grey door caulking on exterior of entry doors.
- Analytical results confirmed the following Lead containing materials (ACM):

Red painted metal hand rail in the lower level mechanical room – see *Appendix 7: #7-A, A12 image*.

Beige ceramic wall tile in the lower level corridor.

- ii) Asbestos in roofing, roof flashing, duct wrap, pipe insulation, flooring lead paint and coatings and other building components.
 - According to the Apex report, ACM presence was found in the following areas/items:

Exterior windows, throughout the 1st floor, meeting room (Lower Level), Elevator machine room (Lower Level), corridor (Lower Level), staff kitchen (Lower Level) and exterior of front/rear entrance doors (1st floor).

- iii) Mercury in lamps (light bulb) and thermostat:
 - Apex reviewed “fluorescent lighting ballasts at the site for the presence of Polychlorinated Biphenyls (PCB). Ballasts of representative lighting fixtures were identified and visually inspected. None were observed to be suspect of containing PCB”.
 - Apex identified “fluorescent lamps throughout the inspected areas of the subject building that are suspected to contain mercury. Approximately five hundred and thirty (530) 4-foot fluorescent bulbs were identified. If light ballasts that are not labeled ‘No PCBs’ are identified on site during renovations at the facility, it should be assumed to contain PCBs and disposed of in accordance with the regulations outlined in Volume 40 Code of Federal Regulations (CFR) Part 761”.
 - Apex “did not observe any expansion joint compound or exterior caulking that potentially contains PCBs.
 - See attached **Appendix 5** for more details.
- iv) PCBs in light fixtures and ballasts:
 - See response above to ‘Mercury in lamps’.

- b. Investigate for the presence of mold, mildew, fungus, bacterial compounds or rot, radon gas etc.
 - Indicate suspicion of a mold, mildew, fungus, bacterial compounds or rot, radon gas, and recommend professional investigation.
 - Apex “performed an inspection for suspect microbial growth and water damage throughout the subject property. Apex observed approximately 150 linear feet of mold impacted fiberglass pipe insulation located in the crawlspace on the lower level.
 - See attached **Appendix 5** for more details.
- c. Recommendations:

- Engage the services of an abatement contractor whose activities comply with applicable local, state and federal requirements.
- Hazmat, Asbestos removal and monitoring
 - Time Frame: Immediate
 - Cost: \$60,000

13. Miscellaneous Hazards / Inefficiencies

- a. Investigate for the presence of a miscellaneous issues and inefficiencies etc:
 - The following additional exterior issues and inefficiencies were observed:
 - Library Book drop-off on the West façade was none ADA complainant, and was not prominently located – see *Appendix 7, #7-A13.1*.
 - The following additional interior issues and inefficiencies were observed in the public areas:
 - Corroded A/C units.
 - Pest control placed under the A/C units
 - Exposed Mechanical Unit piping.
 - Non-adjustable or unsuitable work surfaces/furniture for kids.
 - Non-ADA compliant or non-adjustable ADA furniture.
 - Surface mounted electrical outlets.
 - Lose display racks or storage units, placed randomly.
 - Unorganized wire management.
 - Books displayed A/C units.
 - Lose Book shelving base or rough furniture/shelving surfaces.
- b. Recommendations:
 - Relocate or redesign the existing book drop off.
 - Replace the A/C units.
 - Mitigate the pest control issues.
 - Provide suitable child height furniture or provide adjustable furniture.
 - Provide ADA compliant furniture for designated ADA stations.
 - Reorganize electrical wiring and provide better wire management to work stations.
 - Provide an organized book display system.
 - Time Frame: Immediate
 - Cost: \$181,000
 - Time Frame: Extended
 - Cost: \$9,460

B. Structural System

Sheladia was tasked by Montgomery County Government, Department of General Services to provide a structural assessment of the Chevy Chase Public Library. The assessment performed by the structural engineer was limited to a visual survey of the areas readily accessible and did not include inspection of the attic, foundation or any other covered elements and as such does not address any latent deficiencies.

The following codes and design loads are applicable to the facility:

a. Applicable Codes

- International Building Code 2015 with Montgomery County Amendments
- International Existing Building Code 2015
- Chapter 8 of County Building Code
- ACI 318-57

b. Design Loads

- Snow load on the roof: 30 psf
- Dead load on truss top chord: 15 psf
- Dead load on truss bottom chord: 5 psf
- Live load on truss bottom chord: 8 psf

1. Floors

a. Fire Resistance:

- There's concern regarding fireproofing requirement of the Mechanical Equipment Room ceiling.

b. Floor framing member (beams, girders, slab etc.), condition such as crack, spalling, and excessive deformation of framing members.

- i) As shown in *Appendix 10: #10-B, B1.1*, a continuous gap is visible between the concrete stair landing at the East side of the building providing access to the emergency exit door of the "Adults and Young Adults Room".
- ii) Corner of the stair landing in the Mechanical Equipment Room is chipped away, as it can be seen in *Appendix 10: #10-B, B1.2*.
- iii) Multiple holes were found in the ceiling of the Mechanical Equipment Room which were made for the installation of pipe supports or passage of pipes. *Appendix 10: #10-B, B1.3 through B1.7*, show the mentioned holes.
- iv) The base of the partition wall at the Mechanical Equipment Room is damaged potentially as a result of the previous flooding in the room. *Appendix 10: #10-B, B1.8 & B1.9* show the mentioned condition.

c. Severity of cracks on floor: None seen.

d. Beam/truss/joist bearing conditions: N/A.

e. Floor opening framing members: Sump cover shows signs of rust, as it's evident in *Appendix 10: #10-B, B1.10*.

f. Equipment pads size and condition:

- Equipment pads have adequate size and are in good condition.

g. Vibration due to floor mounted equipment: N/A.

h. Wheel loads on floors: N/A.

i. Recommendations:

- Mechanical and Equipment Room
 - a) Damaged concrete stair landing: Patch using Portland cement-based patching compound.
 - b) Pipe penetrations the floor/ceiling without proper fire proofing: Properly fill and patch existing holes in ceiling and walls to meet building fireproofing requirements.
 - c) Rust on ejector pump cover: Clean the rust from cover and paint with rust proof primer.
 - d) Damage to base of partition wall: Patch the wall at the base using cement plaster. Paint to match with existing wall color. Provide new wall guards.
- East face of the building, gap between building enclosure and concrete stair landing:
 - a) Provide caulking all around the gap to prevent further growth of the gap opening.
 - Time Frame: Necessary
 - Cost: \$28,780

C. Mechanical Systems

For field observation images listing, issues and recommendations refer to the attached Appendix:

- Appendix 11, Mechanical Systems: Image Tabulation

1. Heating System

- a. System Configuration: Singular central boiler feeding two pipe changeover piping arrangement.
 - Pumps distribute heating water that is piped throughout the building to terminal units such as floor mounted unit ventilators and fan coils, above ceiling fan coils and dual temperature coils in air handling units for heating. The air handling units are all located in the mechanical room.
 - Two electric unit heaters are used to provide heat to the mechanical room and stairwell. Both are Chromolox units ranging from 3.7 – 4 kW.
- b. Approximate date last replaced:
 - Boiler: 1991
 - Pumps: 1992
 - Piping: 1965
 - Unit Heaters: 1992
- c. Present Conditions:
 - The Weil-McLain 1,300,000 BTU/hr natural gas boiler displays noticeable surface corrosion along with otherwise normal component deterioration expected from a 28 year old unit – see *Appendix 11, #11-C, C1.1*.
- d. Recommendations for rehabilitation, remediation, upgrading or repair of the heating system:
 - The existing boiler is deteriorating and past its expected service life. This boiler should be removed and replaced immediately with two new high efficiency natural gas fired condensing boilers at 60% capacity (800,000 BTU) each for better heating control and redundancy.
 - Time Frame: Immediate
 - Cost: \$53,000

2. Air Conditioning System

- a. System Configuration: Singular air cooled chiller located next to building.
 - The AC system utilizes pumps and piping shared with the heating system described in Section 1 above.
- b. Approximate date last replaced:
 - Chiller: 2018
 - Pumps: 1992 (same as outlined in Section 1)
 - Pipes: 1965 (same as outlined in Section 1)
- c. Present Conditions:
 - The Trane CGAM 60 ton capacity chiller unit shows in good working order and is less than half way into its expected service life – see *Appendix 11, #11-C, C2.1*.
- d. Recommendations for rehabilitation, remediation, upgrading or repair of the air conditioning system:

- No action is required for the current chiller. However, the pumps and piping should be immediately replaced to avoid leaking and mechanical failure. There are (2) disconnected chillers and (2) disconnected pumps in the mechanical room that should be removed.
- Time Frame: Immediate
- Cost: \$19,500

3. Air Distribution System

- a. System Configuration: The existing air distribution is split between multiple different mediums. This system includes air handling units (AHUs), unit ventilators (UVs) and fan coil units (FCUs):
 - On the ground floor, AHU-1 supplies air to the Stack Room through a series of rectangular ductwork and supply registers. This unit also provides outside air through a ducted louver connected to the return air plenum.
 - The ground floor Meeting Room utilizes two existing UVs and one ducted exhaust fan located in the mechanical room for relief air.
 - Conditioned air for the Main Floor central circulation and desk area (102) is supplied by AHU-2 through ducted supply registers on both sides of the room's vaulted ceiling. This unit also provides outside air through a ducted louver connected to the return air plenum. A large 48x30 floor grille located behind the Information Help Desk returns the air to the plenum below.
 - Both Main Floor Vestibules (101 and 106) contain small FCUs.
 - The Main Floor library book sections (103, 104 and 105) implement a combination of UVs and FCUs to provide air to each respective space. This includes a total of 6 UVs and 8 FCUs. In addition, there is an exhaust fan located in the attic that is ducted to each zone to provide relief air.
 - Employee offices 113, 114A, 114B, 114C and the Staff Lounge 115 possess individual fan coil units (5 total).
- b. Approximate date last replaced:
 - AHU-1 & AHU-2: 1991
 - Meeting Room UVs: 1965
 - Vestibules (101 & 106) UVs: 1965
 - Book Sections (103, 104 & 105) UVs: 1965
 - Book Sections (103, 104 & 105) FCUs: 1965
 - Employee Offices (113, 114A, 114B & 114C) FCUs: 1965
 - Staff Lounge (115) FCUs: 1965
- c. Present Conditions:
 - AHU-1 is a 2.5 Ton, ceiling hung, York unit that is past its expected service life and shows the deterioration expected of 28 year old equipment – see *Appendix 11, #11-C, C3.1*. The Stack Room that AHU-1 was originally designed to serve has since been split into two different spaces, creating temperature control issues for this single zone unit.
 - AHU-2 is a 12 Ton, floor mounted, York unit installed during the 1990 renovation process. This unit exhibits noticeable signs of disrepair with loud audible operation and evidence of crevice corrosion - see *Appendix 11, #11-C, C3.2*.

Furthermore, AHU-2 is past its expected service life and vulnerable to mechanical failure.

- The two existing 3 Ton UVs present in the Ground Floor Meeting Room show definitive signs of aging that have left them in poor physical and mechanical condition.
 - Both Main Floor Vestibules (103 and 104) contain deteriorating FCUs original to the building. Their excessive age leaves them well past their expected service life and prone to potential unit failure.
 - The UVs and FCUs present in the library Book Sections (103, 104 & 105) lie in varying states of disrepair. Being original to the building, many show noticeable signs of general attack and/or localized (crevice, filiform) corrosion - see *Appendix 11, #11-C, C3.3 and C3.4*. In addition, a high number lack their corresponding grille/face covers, leaving them in poor physical and mechanical condition.
 - The Employee Offices (113, 114A, 114B & 114C) and Staff Lounge (115) possess FCUs original to the building that are in conditions consistent with those found in the adjoining Book Sections.
 - The accessible ductwork for the air distribution systems appeared to be in good working order. The ducts in the mechanical room were noted to be free of corrosion, with insulation intact where provided. The majority of the building contains ductwork that is not accessible without disrupting the hard ceilings, or using an extended ladder (over 15 feet tall), so this ductwork was not inspected.
- d. Recommendations for rehabilitation, remediation, upgrading or repair of the air distribution system:
- the Basement level suffers from a distinct musty smell attributed to water intrusion and lack of dehumidification. As a result, the air handling unit (AHU-1) and unit ventilators that serve this space are recommended for immediate replacement with a four pipe system that possesses humidity sensors and reheat coils for humidity control.
 - Both AHU-1 & AHU-2 are rapidly deteriorating and are recommended for immediate replacement. New air handling units should be four pipe systems that possesses humidity sensors and reheat coils for humidity control, constructed of 1-inch double-wall casing, MERV-13 filters, equipped with ECM motors for energy efficiency and be compatible with BACNet DDC controls.
 - All FCUs within the library Book Sections (103, 104 & 105) should be removed and replaced with new units compatible with BACNet DDC controls. This change will combat the numerous staff complaints of large temperature fluctuations between rooms.
 - During immediate renovations, the air distribution ductwork should be inspected and replaced as needed.
 - A new front entrance is being proposed on the West side of the building, which will require a split heat pump unit for cooling and heating.

- Time Frame: Immediate
- Cost: \$456,000

4. Make up / Fresh Air Intake System

- a. System Configuration:
 - There are no dedicated make up and fresh air systems in this building.
 - Outside air is provided through either the air handlers or unit ventilator mentioned in Section 3, with ducted exhaust fans providing relief and pressurization.
- b. Approximate date last replaced:
 - AHU-1 & AHU-2: 1991 (same as outlined in Section 3)
 - Unit Ventilators: 1965 (same as outlined in Section 3)
 - Exhaust Fans: 1991
- c. Present Conditions:
 - The conditions of AHU-1, AHU-2 and all UVs are described in Section 3.
 - All exhaust fans proved to be in adequate working condition but face dwindling service lives. More detailed descriptions are provided in Section 5.
- d. Recommendations for rehabilitation, remediation, upgrading or repair of the make-up / fresh air intake system:
 - No dedicated outside air unit is required within the building's current HVAC system. Recommendations are the same as outlined in Section 3.

5. Exhaust / Relief Air System

- a. System Configuration: variety of exhaust fans serving different zones.
 - Main Floor book sections (103, 104 and 105) utilize ceiling mounted exhaust grilles ducted to a central fan (EF-5).
 - The Staff Lounge (115) and Storage Room (113A) possess their own exhaust fans (EF-2 and EF-9) routed directly to the building's exterior.
 - Exhaust grilles found in the ground floor bathrooms share a duct that run back to a single fan (EF-4).
 - The Ground Floor Meeting Room contains grilles mounted to exposed ductwork that connects to exhaust fan EF-3.
 - A controlled amount of air returning to air handler AHU-2 from the plenum above is exhausted to fan EF-7 and out through a 24x24 louver located in the building's crawl space.
- b. Approximate date last replaced:
 - EF-2: 1965
 - EF-3: 1965
 - EF-4: 1991
 - EF-5: 1991
 - SF-6: 1991 (Assumed)
 - EF-7: 1991
 - EF-8: 1991
 - EF-9: 1991
- c. Present Conditions:
 - Upon inspection, very few of these exhaust fans possessed relevant information tags to verify installation dates. However, all units included in the 1990 renovation fan schedule demonstrated the deterioration expected for fans of that age.

- EF-4, EF-5, EF-7 and EF-9 proved to be in adequate working order but are nearing the end of their expected service life. These units did not show any signs of excessive corrosion or imminent part failure – see *Appendix 11, #11-C, C5.4*.
- Exhaust fans EF-2 and EF-3 are original to the building and well past their expected service life. Both are prone to short-term mechanical failures - see *Appendix 11, #11-C, C5.1*.
- d. Recommendations for rehabilitation, remediation, upgrading or repair of the exhaust / relief air system:
 - Fans EF-2 and EF-3 should be replaced with new units that utilize ECM motors for improved motor efficiency.
 - Exhaust fans installed during the building's 1990 renovation project are still adequate. However, due to dwindling service life, these units should be replaced in the intermediate term future. This will assure long system life and minimize installation costs raised by inaccessibility.
 - Time Frame: Necessary
 - Cost: \$21,000

6. Water Distribution System (chilled, hot, condenser etc.)

- a. System Configuration: The system is a two-pipe, changeover arrangement which provides both hot and chilled water to the AHUs, FCUs, and UVs.
 - The system implements two circulating pumps of different capacities (5 and 10 HP) and brands (Taco and Bell & Gossett). The pumps are connected to a single expansion tank and air separator.
 - The piping and pumps for the heating system are shared with the cooling system, and the mode is manually changed from cooling to heating, or vice versa, via 3-way valves.
 - The pumps distribute hot or chilled water that is piped throughout the building to terminal units such as floor mounted unit ventilators and fan coils, above ceiling fan coils and dual temperature coils in air handling units. The air handling units are all located in the mechanical room.
 - The distribution system possesses a single loop with direct return, which is connected to both the chilled water and hot water systems.
 - The largest pipe size used is 4", and is located in the mechanical room before the piping branches to different zones in the building.
- b. Approximate date last replaced: 1965
- c. Present Conditions:
 - The building's circulating pumps demonstrated both audible and visual signs of wear indicating they are past their expected service life. Two other pumps located in the mechanical room served the old condenser water system but are no longer active and are abandoned in place.
 - The 65 year old piping is original to the building and in certain areas showed noticeable amounts of both general attack and localized (crevice, filiform) corrosion – see *Appendix 11, #11-C, C6.2*.
 - The current two-pipe system can only provide either heating or cooling. During shoulder seasons, when there are warm fall or spring days, the system cannot

immediately provide cooling unless City Maintenance personnel switch the valves over to cooling positions and the chiller is started. This can also occur during late spring and early fall days when the system is already in the heating mode.

- The current system zoning also leaves little control between the different spaces in the building and causes temperature issues throughout.
 - Only the piping in the mechanical room was observed. Some portions were more recently replaced and in good condition, while other portions were aging. Certain sections showed noticeable amounts of both general attack and localized (crevice, filiform) corrosion.
 - All pipe insulation appeared to be intact.
- d. Recommendations for rehabilitation, remediation, upgrading or repair of the exhaust / relief air system:
- The circulation pumps should be replaced in the immediate future.
 - The piping is assumed to be original to the building. However, it still proves adequate and is recommended to be replaced within the next 10 years.
 - The piping in the mechanical room which serves the AHUs should be replaced with a 4-pipe system to allow for simultaneous heating and cooling for humidity control.
- Time Frame: Immediate
 - Cost: \$41,000

7. Automatic Temperature / Humidity Control System

- a. System Configuration: hybrid electric/pneumatic
- The temperature control system is a hybrid electric/pneumatic that utilizes a Siemens control panel located in the basement mechanical room.
 - A single air compressor with refrigerated dryer and filter is also located in the mechanical room.
- b. Present Conditions:
- The system is believed to be in good working order. However, there are numerous complaints regarding the temperatures in the building. This could be caused by a poor control system, un-satisfactory zoning and/or shortcoming of the two-pipe system.
- c. Recommendations for rehabilitation, remediation, upgrading or repair of the exhaust / relief air system:
- Pneumatic control is an old technology and has long lost favor due to high maintenance, energy cost to operate compressors, inaccuracy, hysteresis and complexity of hardware. The temperature control system should be upgraded to a web based, ASHRAE Standard BACNet DDC control system.
- Time Frame: Immediate
 - Cost: \$117,300

8. Alternate System Proposal – VRF

a. System Configuration: Variable Refrigerant Flow

- A VRF system allows large individual zone flexibility with precise temperature control, improved reliability and high energy efficiency. Unlike the building's current system, converting to VRF would allow simultaneous heating and cooling between different spaces.
- Utilizing a combination of indoor fan coil units, outdoor condensing units and a dedicated outside air unit, this system would eliminate the existing boiler, chiller, air handling units and unit ventilators.
- A new 2500 CFM dedicated outside air (DOAS) unit is recommended to support the proposed air distribution system. This unit should be installed in the basement and can utilize the existing air distribution ductwork.

b. Recommendations for installation:

- Install new indoor VRF units (with economizer modes) that are compatible with BACNet DDC controls and actuators in approximately the same locations as existing fan coil units.
 - Install new outdoor VRF air cooled condensing units with a cumulative cooling capacity of 60 tons in existing chiller yard
 - Install new 2500 CFM dedicated outside air unit compatible with BACNet DDC controls and re-use existing air distribution ductwork.
- Time Frame: Immediate
 - Cost: \$472,250¹

1 - The VRF system requires less equipment than the current two pipe system used in the building. The chiller, boiler, and their associated pumps would be replaced with one set of condensing units for heating and cooling loads, while the AHUs which serve the two levels would be replaced by smaller FCUs and one dedicated outside air unit. The removal cost would be comparable for the two systems, while the quantity of new equipment is smaller with VRF and thus has a lower overall cost. If all equipment will be replaced at the same time, VRF would be the main recommendation, with an associated cost saving of \$118,000.

D. Plumbing Systems

For field observation images listing, issues and recommendations refer to the attached Appendix:

- **Appendix 12, Plumbing Systems: Image Tabulation**

1. Domestic Water Supply and Distribution

- a. System Configuration:
 - A 2-inch incoming water service is located in the basement.
 - There is no backflow preventer on the main incoming water line – see *Appendix 12, #12-D, D1*.
 - A 1-inch branch line feeds a Reduced Pressure Zone Assembly (RPZ, ASSE 1013) serving the limited area sprinkler system.
- b. Distribution Piping
 - The mains, risers, and majority of the distribution piping is believed to be original to the 1965 building construction. Domestic water piping is primarily copper with solder connections with a few segments of the piping surrounding the water heater utilizing press fittings.
 - Segments of piping upgrades include around the water heater in the basement as well as at the group restrooms which were renovated in 2009
- c. Approximate date last replaced:
 - Scattered upgrades at group restrooms (2009) and around water heater (2011).
- d. Present Conditions:
 - The majority of the domestic water distribution piping is original to the building.
 - No major issues were reported to by the building staff, the system is due for an upgrade due to the age of the system.
- e. Recommendations for rehabilitation, remediation, upgrading or repair of the domestic water distribution system :
 - A new 2-inch Double Check Valve Assembly (DCVA, ASSE 1015) should be installed on the incoming water service prior to branching off to any fixtures or equipment. This is an immediate Class 1 recommendation.
 - All existing domestic water piping throughout the entire structure should be replaced. This recommendation would be part of the extended renovation category (Class 3, 36-72 months) and may be undertaken in segments based on other renovations planned for the library.
 - Time Frame: Necessary
 - Cost: - \$23,750
- \$85,000 – Replace all domestic water piping

2. Domestic Hot Water Heating System

- a. System Configuration: Tank type, gas fired, domestic water heater with recirculating loop.
 - The hot water is generated in the basement mechanical room.
 - The unit has 1-inch cold and hot water connections
 - A 3/4-inch hot water return line along with a circulating pump maintain temperature within the hot water system.

- b. Domestic Water Heater
 - Make: Ruud
 - Model: Pacemaker, P2-40F1
 - Manufacture Date: 2011
 - Capacity: 40 Gallons
 - Gas Input: 38,000 BTU
 - Recovery (90°F temp. rise): 38.4 Gallons/Hour
 - Energy Factor: 0.59.
- c. Hot Water Recirculating Pump
 - Make: Bell & Gossett
 - Model: Series 100
 - Power: 1/12 HP, 115 V, 1 PH, 1725 RPM
 - Flow/Head: 20 GPM @ 6 FT TDH
- d. Approximate date last replaced:
 - Water Heater: 2011
 - Recirculating Pump: Believed to be same as water heater (unable to confirm)
 - Pipes: 2011 (same as water heater) – Connecting back to original (1965) distribution piping.
- e. Present Conditions:
 - The water heater was constructed in 2011 and is currently 8 years old. Overall it is in good condition with no signs of leaks or corrosion.
 - The system is set on “LOW” for the temperature maintenance, which does not provide satisfactory hot water at the staff pantry sink - see *Appendix 12, #12-D, D2*.
 - Within the boiler room, only 1/2” thick insulation was observed on piping up to the isolation valves at the water heater and circulating pump
 - Some sections immediately up and downstream of the water heater did not have any insulation.
 - There are various types of piping and valves installed around the water heater, including press and solder fittings. There are signs of corrosion on a few pipe segments and valves/fittings.
- f. Recommendations for rehabilitation, remediation, upgrading or repair of the domestic hot water system:
 - A new condensing gas fired water heater is recommended for replacement of the existing unit within the basement. The unit should be supplied with all new trim, valves, and controls. This is a Priority Class 3 renovation (36-72 months).
 - Adjusting the water heater setting to “HOT” is recommended in order to increase the output temperature of the water heater. This is an immediate implementation recommendation which should be in line with the installation of thermostatic mixing valves on the hot water supply (See D.3)
 - Time Frame: Necessary
 - Cost: \$23,000 - New condensing water heater and trim

3. Thermostatic Mixing Valves

- a. System Configuration: Currently there are no mixing valves installed at the source (ASSE 1017) or at the individual fixtures (ASSE 1070).
- b. Present Conditions:
 - Currently the hot water heater has a “LOW” setting, with the output temperature low enough to avoid scald hazard under normal operation.
 - However there is potential for fluctuations in the heater outlet temperature which may be higher than expected, creating a potential scald hazard at the fixtures.
 - Additionally as outlined in D.2, the hot water temperature at the pantry sink is too low and would warrant the adjustment of the water heater temperature setting.
 - As per current code, a master mixing valve (ASSE 1017) is required on systems implementing a recirculating pump.
- c. Recommendations for rehabilitation, remediation, upgrading or repair of the hot water and scald prevention system:
 - As per current code a master mixing valve (ASSE 1017) is required on systems implementing a recirculating pump. This would require a 1-inch inlet/outlet thermostatic mixing valve to be installed at the hot water heater in the basement. This is a Class 1 priority.
 - For public handwashing fixtures, a thermostatic mixing valve (ASSE 1070) is required at the hot water supply to the respective fixture. This valve would prevent temperatures from reaching or exceeding 110°F. The mixing valves would be installed at each lavatory and set at 105°F. This is a Class 1 priority.
 - Time Frame: Immediate
 - Cost: Install new ASSE 1017 Mixing Valve - \$7,000
Install 5 new ASSE 1070 Mixing Valves - \$10,000

4. Plumbing Fixtures

- a. System Configuration:
 - A variety of plumbing fixtures are installed throughout the library - see *Appendix 12, #12-D, D4*.
 - During the restroom renovation, sensor flush valves, waterless urinals, and sensor lavatory faucets were installed.
 - Sensor flush valves on the toilets were later replaced again with manual devices, while one sensor operated flush valve remains in the men’s bathroom
 - This sole sensor flush valve is also not the original, but rather a later retrofit of the previously installed sensor flush valve.
 - The remainder of the building plumbing fixtures including the mop sink, pantry sinks, and first floor restroom, all appear to be original fixtures to the building.
- b. Approximate date last replaced:
 - The basement restroom was renovated in 2009 with new toilets and urinals installed.
 - As mentioned above, the flush valves for the toilets have been replaced since the renovation, although dates for these retrofit installations are not available.

- The remainder of the plumbing fixtures are either original to the 1965 construction or potentially part of a 1979 renovation.
 - As the provided drawings don't line up with the current layout of the facility, it is not clear when exactly the fixtures were installed.
- c. Present Conditions:
- The restrooms and pantries within the building are not fully ADA compliant. The primary issue is space and clearances from fixtures and partitions. Toilet partitions are not spaced to offer wheelchair access to the designated toilet for full ADA compliance - see *Appendix 12, #12-D, D4*.
 - The urinal spacing is not compliant as the units are too close to one another and to the adjacent partitions (IPC 405.3). Refer to the architectural portion of the report as well for additional information on accessibility deficiencies.
 - Basement Janitor's Sink – Fair: Old with original enamel/paint peeling off
 - Basement Pantry Sink – Good: No visible damage or leaks around sink
 - Basement Water Cooler – Fair: Single unit (non-wheelchair accessible), no visible damage or leaks.
 - Basement Group Restrooms – Good: Fixtures are operational and well maintained. No visible signs of leaks or damage. Water hammer is noticeable when valves/faucets are activated.
 - First Floor Administrative Restroom – Fair: Original fixtures with some corrosion showing on lavatory drain outlet. Toilet is extremely loud when flushed with potential water hammer issues.
 - First Floor Pantry Sink – Good: No visible damage or leaks around sink
- d. Recommendations for rehabilitation, remediation, upgrading or repair of the plumbing fixtures:
- Refer to section D.3 for Immediate priority upgrade for the restroom lavatories to implement thermostatic mixing valves.
 - The first floor staff restroom should be fully renovated with a new toilet and lavatory. Priority Class 1.
 - Replace first floor pantry sink. Priority Class 2
 - Replace basement pantry sink. Priority Class 2
 - Replace mop sink. Priority Class 2
 - Rearrange and upgrade basement group restrooms for ADA compliance. Priority Class 1
 - Replace existing drinking fountain with new high-low unit and with bottle filler. Priority Class 1
- Time Frame: Immediate
 - Cost:
 - i. First floor staff restroom - \$3,800.
 - ii. Rearrange group restrooms for ADA compliance - \$37,900.
 - iii. Replace drinking water fountain - \$16,320.
 - iv. Replace Floor Drains - \$5,000.

- Time Frame: Necessary
- Cost:
 - i. Replace basement pantry sink - \$1,650.
 - ii. Replace basement pantry sink - \$1,650.
 - iii. Replace basement pantry sink - \$1,650.

5. Sanitary Waste

d. System Configuration:

- The sanitary system consists of gravity drainage lines serving the first floor fixtures with the 4-inch main exiting the structure to the West.
- All basement fixtures, including group restrooms and mechanical room drains spill into a sewage ejector located in the basement mechanical room. The ejector pumps discharge into the gravity sewer which runs below the South wing of the building.
- There is some discrepancy regarding the available design drawings which have contradicting information of how the sanitary sewer is drained out of the building. Certain site utility and plumbing drawings show the sanitary sewer exiting West, while later as-built drawings show the 4-inch building sewer heading East, with a modified basement drainage approach.

e. Present Conditions:

- The force main from the sewage ejector passes above electrical panels prior to penetrating through the South wall of the mechanical room. Even though there is a drip pan installed, it is not recommended to have any plumbing piping crossing overtop electrical panels - see *Appendix 12, #12-D, D5*.
- The mechanical room drains are in poor condition and would warrant replacement.

f. Recommendations for rehabilitation, remediation, upgrading or repair of the sanitary waste system:

- Due to conflicting information on drawings that were provided, it is not clear if the basement restroom fixtures and South area well all drain into the ejector pump. As such a dye test would be recommended to determine exactly which fixtures are draining into the ejector basin. This will help in evaluating the replacement pump size as well as any potential storm/sanitary cross connection of the area well. This is a Class 1 priority to aid in determining the best approach for the proposed renovations.
- Remove and replace existing ejector pumps (duplex) along with new controller, discharge piping, and sump basin. This is a Class 1 priority.
- Reroute force main from ejector pump to avoid electrical panels.
- Connect new force main to the gravity sewer in the crawl space. This is a Class 1 priority as the force main pipe could cause extensive damage to electrical equipment due to condensation or leaks above the panel.

- Time Frame: Immediate
- Estimated Cost: \$36,000

6. Storm Drainage System

g. System Configuration:

- The building utilizes several downspouts around the building to convey rainwater from the roof gutters to the underground storm sewer.
- Refer to the architectural portion of this report for additional information regarding the assessment of the downspouts and gutters.
- Area drains are located at the North patio as well as in the Southwest area well.

h. Present Conditions:

- The existing storm drainage system is in fair condition although there are concerns with debris and clogs of the existing piping. Additionally, it is believed that the South area well has an area drain tying to the basement ejector pump which should only be dedicated to sanitary sewer.

i. Recommendations for rehabilitation, remediation, upgrading or repair of the storm drainage system:

- Prior to any new downspout installation, a jet cleaning of the existing underground storm sewer is recommended. The cleaning would begin at each grade opening and allow for any debris to be flushed out of the horizontal mains. This would require approximately 11 points of entry for the hydro-jet with an anticipated 50-foot length of pipe to be cleared for each segment of the storm line. This is a Priority Class 1 recommendation as it impact multiple other recommendations and upgrades, as well as allows for better drainage for the entire site.
- Refer to the architectural portion of this report for proposed upgrades to the downspouts and gutters.
- To coincide with the architectural recommendation of the North patio canopy, any provided gutter or downspout would be connected to a new cast iron boot which would tie to the site gravity storm sewer.
- To coincide with the perimeter landscape and pavement upgrades as outlined in the architectural portion of this report, a new area and planter drain would be provided at the podium/ramp.
- To coincide with the storefront upgrades listed in the architectural portion of this report, a new scupper or gutter system would be provided with a downspout and tie into the site storm sewer.
- Provide 3-foot diameter, 5-feet deep sump basin and duplex pumps (2 x 1HP) at the North patio with controller and discharge piping connected to the gravity storm sewer. The sump pump would help with drainage of the patio as well as allow for connection of the proposed perimeter foundation drainage system to the sump. Refer to the structural portion of this report for foundation drainage and water infiltration analysis. This is a Priority Class 2 upgrade.

- Time Frame: Immediate
- Estimated Cost: \$48,450

E. Electrical Systems

For field observation images listing, issues and recommendations refer to the attached Appendix:

- **Appendix 13, Electrical Systems: Image Tabulation**

1. Primary Electrical System

- a. System Configuration: The building electrical distribution is comprised of three (3) service rated main enclosed circuit breakers via a wire trough through a 208/120V, 3-phase, 4-wire C/T cabinet located in the Basement.
 - The electrical service is provided by PEPCO.
 - The three (3) service rated main breakers are as follows:
 - 400A/3B Main Circuit Breakers: Main Distribution Panel (MDP)
 - 400A/3B Main Circuit Breakers: Chiller
 - 225A/3B Main Circuit Breakers: Elevator
 - The majority of the distribution panels located in the basement mechanical / electrical room and panel "B" located in the hallway support all of the normal power electrical loads in the building.
- b. Approximate date last replaced:
 - Primary Distribution System: 1965
 - Elevator Electrical Equipment: 1991
- c. Present Conditions:
 - The equipment listed above are manufactured by Square D, except for the breaker that is serving the elevator, which is manufactured by Westinghouse.
 - Based on our conversation with the facility personnel during the site visit, there are no known issues with the electrical system. However, the incoming electrical service is over 50 years old and had no known upgrades – see *Appendix 13, #13-E, E1.1*.
 - While the panelboards appear to be in fair condition, the majority of the panels are beyond their life expectancy – see *Appendix 13, #13-E, E1.2*.
- d. Recommendations for rehabilitation, remediation, upgrading or repair of the primary electrical system:
 - Given its advanced age, we strongly recommend that the electrical incoming service be replaced.
 - The existing C/T Cabinet and service feeder should be removed and replace with new units.
 - The system should incorporate a new 400A, 208/120V, 3-phase, 4-wire Main Distribution Panel (MDP) and associated feeder and branch circuit wiring. New 400A/3B main circuit breakers should also be installed to serve this new MDP.
 - The main circuit breakers that serve the existing Chiller and associated feeder should be replaced with new 400A/3B units. In a similar manner, new 225A/3B main circuit breakers should also be installed to serve the elevator and associated feeder.
 - Time Frame: Immediate
 - Cost: \$37,000

2. Emergency Power System

- a. System Configuration: The emergency lighting system is currently fed from the existing panel "EM," which is tapped off of the C/T cabinet via a service rated disconnect switch.
 - Exit signs and wall mounted emergency battery units are provided for emergency illumination.
- b. Approximate date last replaced: 1965
- c. Present Conditions:
 - The emergency distribution system, including all associated feeders and branch wiring, is original to the building and past its expected service life.
 - The existing emergency panel and associated branch wiring serving the emergency lighting has exceeded its life expectancy and is recommended to be replaced – see *Appendix 13, #13-E, E2.1*.
- d. Recommendations for rehabilitation, remediation, upgrading or repair of the emergency power system:
 - We recommend that all the life safety loads in the building, including the fire alarm system, be fed from the same panel.
 - The existing emergency panel and associated tap feeder should be removed and replaced with a new 60A, 208/120V, 3-phase, 4-wire emergency panel, associated tap fee and associated branch wiring.
 - Time Frame: Immediate
 - Cost: \$6,060

3. Lighting System and Controls

- a. System Configuration: The building is illuminated via a combination of recessed and surface mounted 1x4 and 2x4 fluorescent linear fixtures and fluorescent recessed and surface downlights.
 - The main area of the library is provided mostly with 2x4 surface mounted fixtures installed with four (4) 25W T8 lamps.
 - Most of the offices, restrooms, the meeting room and vestibule are provided with recessed 2x4s with prismatic lenses.
 - One office in the basement has recessed 2x4 fixtures with parabolic lenses and a handful of recessed fluorescent downlights.
 - The men's and women's restrooms (located in the basement) have recessed 2x4 fixtures and a couple of wall mounted vanity fixtures.
 - All of the existing lighting fixtures throughout the building are controlled via toggle switches for on-off operation only. Occupancy sensors are installed in the main area of the library.
- b. Present Conditions:
 - With the exception to these currently renovated areas, the majority of the lighting throughout the building, especially the fixture covers, are starting to show some shade of yellow. However, they appear to be in good condition and operational – see *Appendix 13, #13-E, E3.1 and #E3.2*.
 - The men's and women's restrooms located in the basement appear to have been recently renovated. The recessed and vanity fixtures within these spaces

demonstrated no signs of deterioration or excessive wear that would lead to failure.

c. Recommendations for rehabilitation, remediation, upgrading or repair of the lighting system and controls:

- With the existing light fixtures, which presumably were installed with switching only ballasts, the lighting in the building will not be able to support day light harvesting and additional control requirements, including occupancy sensors, as per the current energy code.
 - While the existing lighting system is in good operational condition, LED lighting shall be considered as the basis of design for all future fixtures in order to enhance energy savings. The fixtures may be pendant, surface or recessed mounted into ceilings as applicable. Select areas may also be equipped with downlights or supplemented with other specialty luminaires to address functional requirements and create visual elements in the space.
 - The new lighting system for the building is proposed to be designed to conserve energy and minimize glare while providing a pleasant, comfortable and functional environment. The guidelines set forth by the Illuminating Engineering Society (IESNA) shall be used to establish target-maintained illumination levels throughout all spaces. Specific influences of glare, task complexity, surface reflectance characteristics, ceiling brightness, and usage shall be addressed with this procedure.
 - It is recommended that when non-accessible ceilings are present, the typical interior lighting LED modules shall be field serviceable from below. LEDs shall be RoHS compliant, 80 CRI (minimum), with a maximum of 2.5 step McAdam ellipse color consistency. LED data shall be tested in compliance with IESNA LM-70, LM-80 and TM-21 protocol. Lamp life shall carry a minimum rating of 50,000 hours at L70. Intended LED current (mA) and driver shall be fully compatible, as stated so by both manufacturers.
 - To assure long service life, we are recommending that the existing controls be demolished and replaced with automatic control, including occupancy and daylight sensors.
 - An occupancy sensor control system would be used with manual override switches to control all interior non-emergency light fixtures in the building. The system would consist of wall or ceiling-mounted sensor devices that operate in conjunction with relay units, which in turn send the signals to control the lighting circuits serving the room.
 - Daylight sensors and dimmer switches shall be specified in all applicable spaces in order to meet the daylight harvesting and lighting reduction controls mandates per 2015 IECC requirements and in turn further improve the energy efficiency of the building.
- Time Frame: Immediate
 - Cost: \$80,250

4. Wiring Devices

- a. System Configuration: Basic routing with TELECOM devices, receptacles and associated wiring.
 - The majority of the existing wiring devices are building standard and appear to match the age of the building.
 - The bulk of the wiring devices, including lighting controls, receptacles and their associated branch wiring throughout the building, are surface mounted.
- b. Approximate date last replaced: 1965
- c. Present Conditions:
 - No known issues with the existing wiring devices and associated branches have been presented by building staff. However, the advanced age and expired life expectancy of this equipment leaves vulnerability to potential hazards/failure.
- d. Recommendations for rehabilitation, remediation, upgrading or repair of the wiring devices:
 - The aforementioned age and life expectancy of these components must be considered for personnel's safety when any type of maintenance work is done to the building's electrical system.
 - All TELECOM devices, receptacles and associated wiring should be removed and replaced with new equipment including:
 - (a) New branch circuit wiring that should be copper, type THHN or THWN, minimum #12 AWG in minimum 3/4-inch conduits.
 - (b) New interior conduits that should be Electrical Metallic Tubing (EMT) unless required otherwise by code.
 - (c) All exterior exposed conduits should be Galvanized Rigid Steel (GRS) and all exterior underground conduits should be PVC Schedule 40, unless required otherwise by code or AACPS criteria.
 - Placement of devices should be based on the current furniture and equipment layout except where changes are made architecturally in the interior of the building.
 - For the recommended new electrical work, the power distribution system design would limit voltage drop on feeders to 2 percent and voltage drop on branch circuits to 3 percent. Feeders and branch circuits would be upsized as required. Feeders and branch circuits would consist of insulated copper conductors in raceway.
 - Whenever possible, all new electrical wiring and conduit should be concealed above finished ceilings and in walls. In rooms where there is no finished ceiling, EMT conduit should be installed exposed and painted.
 - Time Frame: Immediate
 - Cost: \$82,800

5. Exterior lighting and Control

- a. Since the majority of the building mounted and pole mounted fixtures appear to be original to the building, we are recommending they be replaced with more efficient LED exterior fixtures.
 - Time Frame: Extended
 - Cost: \$118,050

F. Fire Prevention Systems

For field observation images listing, issues and recommendations refer to the attached Appendix:

- **Appendix 14, Fire Prevention Systems: Image Tabulation**

1. Fire Alarm System

- a. System Configuration: Code standard audible and visual fire alarm system.
 - The existing fire alarm control panel is a Fire-Lite MS-10UD manufactured by Honeywell and installed in the mechanical/electrical room in the basement.
 - Existing fire alarm audio (bell and horn) and visual (strobe) devices installed throughout the Library are placed to comply with code.
- b. Approximate date last replaced:
 - Alarm Devices: 2009
 - Wiring: unknown
- c. Present Conditions:
 - The existing fire alarm audio (bell and horn) and visual (strobe) devices installed throughout the Library appear to be in good working condition – see *Appendix 14, #14-F, F1.1 through F1.3*.
 - The fire alarm system support wiring was largely inaccessible. The condition of these components is unclear but assumed similar to the building's other electrical wiring. This means it is most likely aged and facing limited service life. However, further assessment is required to conclusively determine whether the existing wiring should be upgraded.
- d. Recommendations for rehabilitation, remediation, upgrading or repair of the fire alarm system:
 - The existing FACP, associated fire alarm devices and wiring are recommended to be removed and replaced with new units. This will assure minimal maintenance and a long service life.
 - Time Frame: Immediate
 - Cost: \$67,975

2. Sprinkler System

- a. System Configuration:
 - A 1-inch branch line feeds a Reduced Pressure Zone Assembly (RPZ, ASSE 1013) serving the limited area sprinkler system of the basement.
 - Only the basement boiler room and janitor's closet, as well as the first floor supply closet have sprinkler heads installed.
 - Remainder of the building, including the attic does not have sprinkler coverage.
- b. Distribution Piping
 - The majority of the distribution piping is steel and believed have been installed in 1990.
- c. Approximate date last replaced:
 - Original system, installed 1990.
- d. Present Conditions:

- The overall system is in fair condition and shows no signs of corrosion or malfunction – see *Appendix 14, #14-F, F2*.
-
- e. Recommendations for rehabilitation, remediation, upgrading or repair of the fire sprinkler system:
 - This is a Class 1 recommendation as life safety and protection of property are critical for any renovation. Future renovations should include implementation of a new sprinkler system throughout all areas of the building.
 - Provide a new 4-inch fire service
 - A 4-inch backflow preventer (DCDA – ASSE 1048) would be installed on the new incoming service
 - Full wet/automatic sprinkler system throughout the entire structure.
 - Anticipate 2 wet sprinkler zones (basement and first floor)
 - Anticipate 1 dry sprinkler zone (attic) with dry valve
 - System shall be supervised by a central fire alarm system.
 - A riser-mount air compressor installed in the basement mechanical room to maintain pressure for the dry system.
- Time Frame: Extended
- Cost: \$97,500

G. Site Conditions

For field observation images listing, issues and recommendations refer to the attached Appendix:

- **Appendix 15, Site Conditions: Image Tabulation**

1. Parking Lot

- a. Description of the existing parking lot:
 - Total area: 11,000 sq.ft, approximately.
 - Total number of parking spaces including handicap spaces: 101 spaces (7-accessible parking spaces of which 2 are designed as Van-accessible).
 - Proximity to entrance of handicap spaces: Close proximity.
- b. Condition of the parking lot:
 - The parking area was observed to be patched and cracked in places - see *Appendix 15: #15-G, G1 image*.
 - Approximate date last repaired / resurfaced: Not known.
 - Vehicular circulation issues: No known issues.
- c. Pedestrian circulation issues:
 - The below summary of issues are listed here. For detailed issues and recommendations, refer to the UDC, Inc. ADA Survey Report, **Appendix 2**.
 - Accessible parking space running and cross slopes are non-ADA compliant.
 - Curb ramp slopes are non-ADA compliant.
 - Accessible route cross slopes are non-ADA compliant.
 - No Accessible passenger loading zone at the front entrance to the building that is ADA accessibility complaint.
- d. Signage issues:
 - There is no signage designating the accessible parking spaces. For detailed issues and recommendations, refer to the UDC, Inc. ADA Survey Report, **Appendix 2**.
- e. Appropriate number of spaces to the building occupant / patron load:
 - Yes.
- f. Code related issues in terms of handicap spaces and access to building:
 - Yes, see G-1.e & f and the UDC, Inc. ADA Survey Report, **Appendix 2**.
- g. ADA compliance:
 - As noted above, some of the sidewalk ramps, cross & running slopes are not ADA compliant. For detailed information and recommendations, refer to the UDC, Inc. ADA Survey Report, **Appendix 2**.
- h. Security / controlled access system (type, location, effectiveness, issues): N/A.
- i. Parking attendant structure: N/A.
- j. Recommendations for rehabilitation, remediation, upgrading or repair of parking lot for its intended use:
 - Repair the existing surface cracks.
 - Modify the accessible parking space running and cross slopes, accessible curb ramp slopes to meet ADA compliance.
 - Modify the accessible route cross slopes to meet ADA compliance.
 - Provide an accessible passenger loading zone as recommended by the UDC survey.

- Time Frame: Immediate
- Cost: \$51,274

2. Site Lighting System(s)

- a. Description of the existing parking lot lighting:
 - Site lighting are provided with building mounted and pole mounted fixtures. The exterior fixtures are presumed to be controlled by a time clock, as no evidence of photocells for this purpose was found during the site visit.
 - The building mounted fixtures and associated conduits located along the exterior perimeter of the building are original to the building are showing corrosion. The lenses are becoming yellow in color because of age - see *Appendix 15, #15-G, G2 image*.
- b. Condition and type of parking lot lighting fixtures:
 - The pole mounted parking lot fixtures also appear to be original to the building. The associated junction box covers for the pole mounted fixtures are not properly tightened, thus exposing the wiring in the boxes to water and other outside debris.
 - The luminance level and operational status of the exterior fixtures could not be determined since the site visit occurred during the day.
- c. Recommendations for rehabilitation, remediation, upgrading or repair of site lighting systems for their intended use:
 - Since the majority of the building mounted and all of the pole mounted fixtures appear to be original to the building, we are recommending them to be replaced with more efficient LED exterior fixtures. A photometric calculation shall be performed to provide adequate lighting level per IESNA foot candle recommendations and to comply with the current energy code. Full cut-off pole mounted fixtures shall be utilized.

3. Sidewalks & Curb Cuts

- a. Location and description of sidewalk(s) and curb cut(s):
 - Sidewalk exists all around except South side of the building.
 - A curb cut was located Southwest corner of the property and adjacent to fire station.
- b. Material and condition of sidewalk(s) and curb cut(s):
 - Concrete. Fair to good.
- c. Length and width of sidewalk (in ft.) and curb cut(s):
 - 6' wide side walk. 3'-0" wide curb cut.
- d. Approximate date the existing sidewalk(s) and curb cut(s) were last repaired / resurfaced: Not known.
- e. Circulation issues:
 - See issues identified above in section G-1-Parking Lot.
- f. Indicate all deficiencies in the existing sidewalk(s) and curb cut(s) in terms of ADA requirements, age of the surfaces, code-related issues, vehicular circulation issues, pedestrian circulation issues, signage, maintenance issues and procedures and summary of repair costs over the last 5 years etc.:
 - Sidewalk is worn out in few places.

- Sidewalk ramps are not ADA compliant.
 - Properly constructed curb ramps are required from the parking area to the sidewalks providing access to the library building.
 - Water was observed to be stagnant on one of the East side ADA curb cuts due to stormwater discharge onto this area - see *Appendix 15, #15-G, G3a*.
 - Sidewalks were observed to be cracked in other areas, see *Appendix 15, #15-G, G3b*.
- g. Recommendations for rehabilitation, remediation, upgrading or repair of sidewalk(s) and curb cut(s) for their intended use:
- Replace worn out and cracked sidewalks.
 - Replace sidewalk to meet ADA compliance.
 - Provide curb ramps from the parking area to the sidewalks for building access.
 - Relocate the stormwater discharge pipe away from ADA curb cut.
- Time Frame: Immediate
 - Cost: \$135,628

4. Site Paving & Seating

- a. Location and description of site paving & seating:
- On the East side of the building, currently there is a small exterior paved seating area with 3 exterior garden chairs. This area was observed to be used by the Library patrons regularly.
- b. Material and condition of paving and seating:
- The exiting paving slab surface is uneven, due to overgrown tree roots and improper site drainage – see *Appendix 15: #15-G, G4 image*.
 - The exterior seating is old too.
- c. Recommendations:
- Redesign the East side exterior seating area.
 - Provide new exterior paving and seating.
 - Time Frame: Immediate
 - Cost: \$25,000

5. Existing Trees

- a. Location and description of trees:
- On the building East side of the building there is one (1) large champion tree that has a 'wood plant bed surround', around its roots – see *Appendix 15: #15-G, G5 image*.
 - Additionally also on the building East side there are two (2) large trees located close to the building façade.
 - Between the West building façade and the ADA ramp, there are two (2) existing large trees that are located close to the building. There's improper site drainage in this area.
- b. Material and condition of paving and seating:
- The exiting paving slab surface is uneven. Overgrowth tree roots and improper site drainage seems to have displaced the paving tiles.
 - The exterior seating is old and is located on uneven paved surface.

c. Recommendations:

- Remove the 'wood plant surround' and provide adequate soil for root coverage around the root diameter, topped with wood mulch covering for proper tree maintenance.
- Cut down the trees located close to the East and North building façade, to perform the recommended waterproofing site excavation work.
- Time frame: Immediate
- Cost: \$25,000

6. Stormwater Management

a. Condition of existing system:

- Currently there is improper site drainage and stormwater management at site.
- Issues caused by improper stormwater management is covered under the Architectural Systems, A.2 - 'Foundation / Waterproofing' section.

b. DPS and other agency requirements:

- Not required unless the land disturbance is greater than 5000 sq.ft.

7. Access from Public Transportation

a. Description of existing access from public transportation:

- No bus stop found in the immediate vicinity of the site.
- The nearest bus stop exists along Southbound MD 185 approximately 500' from the site.

8. Utility Locations & Terminations

a. Identify locations of all utilities servicing site along with all components and terminations:

- Could not locate water and sewer lines in and out from the building.

b. Identify updated requirements that will result in modifications to existing service: N/A

c. Confirm easement locations:

- Should be done during design phase

H. Special Areas

For field observation images listing, issues and recommendations refer to the attached Appendix:

- **Appendix 12, Special Areas: Image Tabulation**

1. Restrooms

- a. Description of the existing spaces:
 - The existing restrooms look to have been recently renovated. However they are in poor condition and does not meet ADA accessibility requirements. For detailed survey information, refer to the UDC, Inc. ADA Survey Report, **Appendix 2**.
- b. Condition of the existing fixtures, toilet partitions and accessories, millwork, finishes, ceiling etc.:
 - Cracked wall tile joint(s) – see *Appendix 12, #12-H.1, G102-A5 image*.
 - Toilet entrance doors require push and kick plates – see *Appendix 12, #12-H.1, G102-A7a & G102-A7b*.
 - Toilet fixtures, partitions and other accessories are in working condition. However it was observed that some accessories require re-securing in place due to lose attachments, i.e., toilet seat cover dispenser, WC escutcheon lose etc. – see *Appendix 12, #12-H.1, G102-A13a*.
 - There are two different ceiling systems in the male and female restrooms, i.e., male restroom -
- c. ADA compliance:
 - A facility wide ADA survey was performed by Universal Designers & Consultants, Inc., (UDC). For the existing restrooms, UDC observed a number of none compliant ADA items. Refer to the attached **Appendix 2** report for detailed information.
- d. Appropriate and effectiveness of the existing restrooms with building functions:
 - Due to its location, the restrooms seem isolated from the rest of the Library, from the Main Level.
 - The odor in the restrooms and available means of exhaust in both restrooms was questionable.
- e. Recommendations for rehabilitation, remediation, upgrading or repair of restrooms for their intended use:
 - Recommend designing the existing public restrooms on the Main and Lower levels to meet ADA compliance.
 - Provide new doors with push and kick plates or provide new push and kick plates for the existing doors.
 - Recommend installing security cameras at the Lower Level, since the restrooms (and the other public use spaces / meeting rooms on the Lower level are isolated from the rest of the public areas).
 - Recommend contracting a regular toilet protocol and refilling the dispensers for proper hygiene and use of the restrooms.
 - Time Frame: Immediate
 - Cost: \$86,209

I. Signage and Display Areas

For field observation images listing, issues and recommendations refer to the attached Appendice:

- **Appendix 17, Miscellaneous Components: Image Tabulation – Signage and Display Areas.**

1. Signage

- a. Description of existing signage (exterior, building-mounted, directional, room (permanent and otherwise), building directory, workstation, etc.).
 - Overall the signage is uncoordinated throughout the facility exterior and interior. The Library current has the following signage:
 - Exterior, Building sign: not prominently visible from the road – see *Appendix 17, #17-I, I1.1.*
 - Building mounted sign, West façade: concealed and obstructed by tree foliage – see *Appendix 17, #17-I, I1.2.*
 - Directional signs: mostly consists of random printouts made on paper, temporary in nature – see *Appendix 17, #17-I, I1.3.*
 - Building directory: none observed.
 - Workstation signage: mostly consists of random printouts made on paper, temporary in nature – see *Appendix 17, #17-I, I1.4.*
 - Shelving signage – see *Appendix 17, #17-I, I1.5.*
 - Room signage: Library reference sections are noted with uncoordinated wall mounted graphic signage. Other room signage doesn't readily stand out or provide a room number – see *Appendix 17, #17-I, I1.6.*
- b. Age of existing signage components:
 - Currently unknown.
- c. Sizes of existing signage components:
 - Exterior, Building sign: post mounted Two (2) units, 6'-0" x 3'-0" approximately.
 - Building mounted sign, West façade: wall mounted on the West brick façade. 6" to 8" approximate lettering size.
 - Directional signs: mostly printed on 8 ½" x 11" letter size paper.
 - Room signage: 1 ½" x 3" approximately.
 - Building directory: none found.
 - Workstation signage: mostly printed on 8 ½" x 11" letter size paper.
- d. Materials / finishes of existing signage components.
 - Exterior, Building sign: free standing unit, 4'-0" x 3'-0" approximately.
 - Building mounted sign; Stainless steel.
 - Directional and workstation sign: Paper printouts.
 - Room signage: colored Aluminum signage.
- e. Locations of existing signage components.
 - At the West building site entrance
 - At the West façade.
 - At the West and East building entrance vestibules
 - Building interior walls, doors and furniture
 - On display boards, wall mounted and free standing.
- f. Appropriate and effectiveness of existing signage with building functions.

- The current condition is inappropriate and inefficient.
- g. Condition of signage: Poor.
- h. Life expectancy (illuminated type): Currently unknown.
- i. ADA compliance (Braille, raised letters, mounting height and location, etc.):
 - A facility wide ADA survey was performed by Universal Designers & Consultants, Inc., (UDC). Refer to the attached **Appendix 2** report for detailed information.
- j. Indicate all deficiencies in existing signage in terms of size, installation, type of system, age, energy conservation (illuminated type), code-related issues, maintenance issues, procedures and summary of repair costs over the last 5 years, availability of spare parts etc.
 - As noted above, overall the condition, size and graphics etc., of the existing signage is poor and inadequate to meet the Library needs.
- k. Recommendations for rehabilitation, remediation, upgrading or repair of signage for its intended use:
 - Redesign and install new signage for the entire facility for the site/exterior, building-mounted, directional, room (permanent and otherwise), building directory, workstation(s), etc.
 - Time Frame: Immediate
 - Cost: \$6,300
 - Time Frame: Extended
 - Cost: \$75,000 - New Monument Sign

2. Display Areas

- a. Description of existing display areas:
 - The Library current has the following display areas
 - Storefront wall, East and West building entrances: printouts affixed onto glazed surface.
 - Entrance vestibule, West entrance: Wall mounted display boards, display racks i.e., free standing and wall mounted, and other miscellaneous display surfaces i.e., benches, tables etc, lose plastic racks etc. – see *Appendix 17, #17-1, 12.1 through 12.3.*
 - Public areas: Wall mounted display boards, display racks i.e., free standing and wall mounted, and other miscellaneous display surfaces i.e., benches, tables etc, lose plastic racks etc. – see *Appendix 17, #17-1, 12.4 through 12.6.*
- b. Age of existing display components: Currently unknown.
- c. Sizes of existing display components:
 - Wall mounted display boards and racks.
 - Free standing display racks.
 - Lose, small display units placed on furniture and mechanical equipment.
- d. Materials / finishes of existing display components.
 - Cork display boards - large and small.
 - Metal racks - large and small.
 - Plastic racks - small.
- e. Locations of existing display components: throughout the public areas.
- f. Appropriate and effectiveness of existing display with building functions.

Chevy Chase Library - Facility Assessment

- The current condition is inappropriate and is inefficient.
- g. Condition of display surfaces and mechanism:
 - Poor. Current display components cause obstructions to ADA accessibility clearances and also impedes clear visibility into public areas.
- h. Provide recommendations for rehabilitation, remediation, upgrading or repair of display for its intended use.
 - Redesign and install new display surfaces and mechanisms for the entire facility.
Estimated Cost: \$88,800
 - Time Frame: Immediate
 - Cost: \$7,500

J. APPENDICES

1. Cost Estimate: Forella Group, LLC.
2. ADA Survey: UDC, Inc.
3. Passenger Elevator Report: VDA.
4. Building Enclosure Evaluation: Gale Associates, Inc.
5. Hazmat Report: Apex Companies, LLC.
6. Existing Building: Fire Ratings of Partitions.
7. Architectural Systems: Image Tabulation
8. Existing Building Exterior: Image Tabulation
9. Existing Building Interior: Image Tabulation
10. Structural Systems: Image Tabulation
11. Mechanical Systems: Image Tabulation
12. Plumbing Systems: Image Tabulation
13. Electrical Systems: Image Tabulation
14. Fire Prevention Systems: Image Tabulation
15. Site Conditions: Image Tabulation
16. Special Areas: Image Tabulation
17. Signage and Display Areas: Image Tabulation

J-Appendices:

Section-1

Cost Estimate: Forella Group, LLC

CHEVY CHASE LIBRARY - FACILITY ASSESSMENT
ORDER OF MAGNITUDE (OM) COST ESTIMATE SUMMARY
Date: 10/30/2019

Cost Per Assessment Stage (\$)				
	Immediate Now Oct, 2019	Necessary 18 to 36 months March, 2021 - Sept, 2022	Extended 36 to 72 months Sept, 2022 - Sept, 2028	Total
COST SUMMARY				
TOTAL ARCHITECTURAL SYSTEM	\$ 1,186,512	\$ 196,694	\$ 86,360	\$ 1,469,566
TOTAL STRUCTURAL SYSTEM	\$ 28,780	\$ -	\$ -	\$ 28,780
TOTAL MECHANICAL SYSTEM	\$ 686,800	\$ 21,000	\$ -	\$ 707,800
TOTAL PLUMBING SYSTEM	\$ 164,470	\$ 136,700	\$ -	\$ 301,170
TOTAL ELECTRICAL SYSTEM	\$ 206,110	\$ -	\$ 118,050	\$ 324,160
TOTAL FIRE PREVENTION SYSTEM	\$ 67,975	\$ -	\$ 97,500	\$ 165,475
TOTAL SITE CONDITIONS	\$ 236,902	\$ -	\$ -	\$ 236,902
TOTAL SPECIAL AREAS	\$ 86,209	\$ -	\$ -	\$ 86,209
TOTAL MISCELLANEOUS	\$ 88,800	\$ -	\$ -	\$ 88,800
Subtotal	\$ 2,752,558	\$ 354,394	\$ 301,910	\$ 3,408,862
General Conditions 8.00%	\$ 220,205	\$ 28,352	\$ 24,153	\$ 272,709
Subtotal	\$ 2,972,763	\$ 382,746	\$ 326,063	\$ 3,681,571
OH + P 8.00%	\$ 237,821	\$ 30,620	\$ 26,085	\$ 294,526
Subtotal	\$ 3,210,584	\$ 413,365	\$ 352,148	\$ 3,976,097
Bonds and Insurance 2.00%	\$ 64,212	\$ 8,267	\$ 7,043	\$ 79,522
Subtotal - Cost Present Value	\$ 3,274,795	\$ 421,632	\$ 359,191	\$ 4,055,619
Escalation 3.5%/ yr * 9.91%	\$ 324,368	\$ 41,763	\$ 35,578	\$ 401,709
Subtotal - Base CCAP	\$ 3,599,164	\$ 463,395	\$ 394,769	\$ 4,457,328
Design Contingency 10.00%	\$ 359,916	\$ 46,340	\$ 39,477	\$ 445,733
Designed CCAP Total	\$ 3,959,080	\$ 509,735	\$ 434,245	\$ 4,903,060
TOTAL FULLY LOADED COSTS	\$ 3,959,080	\$ 509,735	\$ 434,245	\$ 4,903,060

* From Oct, 2019 to Midpoint of Construction June 1, 2022

	Immediate	Necessary	Extended	Total
Subtotal - Cost Present Value	\$ 3,274,795	\$ 421,632	\$ 359,191	\$ 4,055,619
RECOMMENDATION: IMMEDIATE + NECESSARY	\$ 3,274,795	\$ 421,632		\$ 3,696,428

CHEVY CHASE LIBRARY - FACILITY ASSESSMENT
ORDER OF MAGNITUDE (OM) COST ESTIMATE DETAILS
Date: 10/30/2019

A. ARCHITECTURAL SYSTEM							Quantity		Unit Cost (\$)		Cost (\$)		Total Cost (\$)		Cost Per Assessment Stage (\$)	
Category	System Type - Interi	Description	Room #	Floor Level			Units									
				Main	Lower											
A-1	Roof	Existing roof repair, See ALT - 1 for Replacement Scrape, prime and paint wood trim throughout Replace existing rain leaders / down spouts					1 LS 1 LS 12 EA	\$ 400,000 \$ 15,000 \$ 200	\$ 400,000 \$ 15,000 \$ 2,400			\$ 417,400	\$			\$ 40,000
A-2	Foundation / Waterproofing / Drainage	Basement Waterproofing related costs Existing champion tree cut down (East façade 2 trees and West façade 2 trees) Existing landscape demolition (East façade) Remove site paving close to the building Replace site paving close to the building Perimeter Excavation for waterproofing Exterior waterproofing (three coats of CrystalFlex 2K SuperStrong) Regrading away from building					4 EA 300 SF 1040 SF 1040 500 LF 5000 SF 500 LF	\$ 1,500 \$ 2 \$ 5 \$ 15 \$ 100 \$ 15 \$ 50	\$ 6,000 \$ 600 \$ 5,200 \$ 15,600 \$ 50,000 \$ 75,000 \$ 25,000			\$ 177,400	\$			
		Insufficient Frostdepth at Perimeter of Adults Room and Reference Room Increase the grade line adjacent to the building by 6" (or as needed to reach minimum 30" depth) for a width of 4'-0"					250 LF	\$ 25	\$ 6,250	\$ 6,250			\$			
		Areaway Paving (West façade) Remove existing brick paving Provide new exterior concrete tile paving sloped to new floor drain					323 SF 323 SF	\$ 5 \$ 20	\$ 1,615 \$ 6,460	\$ 8,075			\$			
		New Design Item: to resolve waterproofing and drainage issues New Canopy over existing Areaway (North façade) - See ALT - 2 New landscaping between the West façade and ADA ramp					300 SF	\$ 8	\$ 2,400	\$ 2,400			\$			
		Northeast corner of building drain Repair/reopen clogged pipe					1 LS	\$ 500	\$ 500	\$ 500			\$			
A-3	Perimeter Skin	West façade - See ALT - 3 for Immediate Replacement New entrance vestibule storefront system New standing seam metal roof above new storefront system Repair west Façade (Seals / Caulking)	101, 107			X	300 SF 300 SF 1 LS	\$ 95 \$ 45 \$ 6,000	\$ 28,500 \$ 13,500 \$ 6,000	\$ 42,000 \$ 6,000			\$			\$ 42,000
		Exterior masonry wall improvements Install sheet metal parapet cap and repaint screen wall.					35 LF	\$ 50	\$ 1,750	\$ 1,750			\$			
		Paint Peeling at Interior face of Basement walls Clean peeling paint, prepare interior wall surfaces for new paint			X		1224 SF	\$ 6	\$ 7,344	\$ 7,344			\$			
A-4	Exterior Glazing	Windows Replacement Remove existing windows and sill Remove existing window blind casing New Windows and Interior window sill	All Rooms G109		X		13 EA	\$ 6,000	\$ 78,000	\$ 78,000			\$			\$ 78,000
		Window blinds New window blinds	104		X		2 EA	\$ 225	\$ 450	\$ 450			\$			450
A-5	Interior Partitions	Paint Interior Walls (Public & Staff Areas) Prepare drywall surface for new finish Remove existing wall base New rubber wall base	All Rooms		X		15000 sf	\$ 3	\$ 45,000	\$ 45,000			\$			

Install new wires as needed for RH sensors			X	All Ground	3 EA	\$	500	\$	1,500	\$	117,300	\$	117,300	\$	21,000	\$	-
TOTAL MECHANICAL SYSTEM																	
D. PLUMBING SYSTEM																	
Category	System Type	Description	Floor Level		Room #												
D-1	Domestic Water		Main	Ground													
Install Backflow Preventer on Incoming Service (1)						X	G108										
Cut and reroute domestic water piping at incoming service							1 LS	\$	10,000	\$	10,000						
Install new ASSE 1015 compliant backflow device (2")							1 LS	\$	5,000	\$	5,000						
Connect existing piping to new BFP							1 LS	\$	2,000	\$	2,000						17,000
Install insulation on expose CW/HW/HWR piping in boiler room						X	G108										
Provide insulation on exposed piping in boiler room							20 LF	\$	100	\$	2,000						2,000
Provide timer/temperature control on hot water return pump (1 each)						X	G108										
Provide aquastat and timer at water heater recirc. Pump							1 LS	\$	2,000	\$	2,000						
Provide circulating/power to new devices (115V outlet)							1 LS	\$	500	\$	500						
Connect and program recirculating pump to building operating hours							1 LS	\$	250	\$	250						2,750
Install new ASSE 1070 Mixing Valves(1)						X	B05, B06										
Install TMV and connect existing water hoses to device							1 LS	\$	2,000	\$	2,000						2,000
Replace domestic water distribution piping throughout the building						X	Entire Building										
Demolish all domestic cold, hot, and return piping back to heater or incoming service.							1 LS	\$	10,000	\$	10,000						
Install all new distribution piping with insulation							1 LS	\$	75,000	\$	75,000						85,000
Replace water heater with condensing high efficiency unit (1)						X	G108										
Cut existing CW/HW piping serving existing heater							1 LS	\$	1,000	\$	1,000						
Provide new condensing heater and reconnect to existing piping							1 LS	\$	20,000	\$	20,000						
Setup and test equipment							1 LS	\$	2,000	\$	2,000						23,000
Thermostatic Mixing Valves																	
Install new ASSE 1070 Mixing Valves on Lavatories (5)						X	116, 118										
Install TMV and connect existing water hoses to device							5 LS	\$	2,000	\$	10,000						10,000
Install new ASSE 1017 Mixing Valve on water heater outlet (1)						X	G108										
Install new master TMV and connect to existing water heater inlet/outlet piping.							1 LS	\$	5,000	\$	5,000						
Connect HWR line with check valve to TMV CW inlet							1 LS	\$	2,000	\$	2,000						7,000
Plumbing Fixture																	
Replace first floor staff toilet fixtures						X	116, 118										
Demolish existing toilet, retain rough in piping.							1 LS	\$	150	\$	150						
Demolish existing lavatory and faucet, retain rough in piping							1 LS	\$	150	\$	150						
Provide new toilet, floor mount top spud (high efficiency 1.28 gpf)							1 LS	\$	2,500	\$	2,500						
Provide new wall mount lavatory with 0.5 gpm faucet							1 LS	\$	1,000	\$	1,000						3,800
Replace first floor pantry sink(1)						X	115										
Remove existing sink retaining rough in							1 LS	\$	150	\$	150						
Install new (in-kind) drop in stainless steel sink with new 1.5 GPM manual faucet.							1 LS	\$	1,500	\$	1,500						1,650
Replace mop sink						X	B07										
Remove existing sink retaining rough in at wall							1 LS	\$	150	\$	150						
Install new (in-kind) cast iron service sink with new manual faucet.							1 LS	\$	1,500	\$	1,500						1,650

D-5	Sanitary Waste	X	B01	Replace basement pantry sink Remove existing sink retaining rough in Install new (in-kind) drop in stainless steel sink with new 1.5 GPM manual faucet.	1 LS \$ 150 \$ 150 1 LS \$ 1,500 \$ 1,650	1,650	\$
				Rearrange group restrooms for ADA compliance Demolish all water closets (4) and cap piping back to main Demolish all urinals (2) and cap piping back to main Demolish all lavatories (4) and cap piping back to main Provide new layout/partitions to meet ADA requirements Rearrange sanitary waste/vent piping per new layout Rearrange new domestic CW/HW/HWR piping per new layout Provide new water closets (4) with carrier and rough in Provide new urinals (2) with carrier and rough in Provide new lavatories (4) with carrier, rough in, mixing valves, and protective pipe Connect new piping to existing	4 EA \$ 150 \$ 600 2 EA \$ 150 \$ 300 4 EA \$ 150 \$ 600 1 LS \$ 12,000 \$ 12,000 1 LS \$ 5,000 \$ 5,000 1 LS \$ 5,000 \$ 5,000 4 EA \$ 1,500 \$ 6,000 2 EA \$ 1,200 \$ 2,400 4 EA \$ 1,000 \$ 4,000 1 LS \$ 2,000 \$ 37,900	37,900	\$
				Replace drinking water fountain Remove existing water fountain Remove wall tiles Remove unused wall attachments New wall tiles Install new high-low water cooler with bottle filling station (ADA compliant)	1 LS \$ 150 \$ 150 4 SF \$ 5 \$ 20 1 LS \$ 50 \$ 50 10 SF \$ 10 \$ 100 2 EA \$ 8,000 \$ 16,000	16,320	\$
				Mechanical Room Replace Floor Drains in Mechanical Room	2 LS \$ 2,500 \$ 5,000 1 LS \$ 35,000 \$ 35,000	5,000	\$
				Replace Existing Ejector Pumps Video trace/examine concealed sanitary main below crawl space slab Excavate crawl space slab to access gravity sewer (9 SF) Demolish existing force main and cap at wall of G108. Remove existing ejector pumps, basin cover, pipes, controller, and vent Inspect and repair existing ejector basin Provide new duplex ejector pumps (2 x 2HP) Provide new steel basin cover with discharge, vent pipe, and access openings Provide new controller Provide new 3" force main and tie into excavated gravity sewer in crawl space Connect new 3" vent line to existing	1 LS \$ 1,000 \$ 1,000	1,000	\$
				Dye Test Use food grade dye to test basement fixture connection to ejector pump (Pour in 3 locations, Toilet, Pantry, Areawell)	1 LS \$ 3,850 \$ 3,850	4,850	\$
				Hydro-Jet Storm Lines Jet accessible storm lines around perimeter of building (11 locations at 50 ft drain pipe length)	1 LS \$ 4,000 \$ 4,000	7,850	\$
				Area Drain At Podium New 4" area drain and storm piping to tie into existing storm line below grade	1 LS \$ 8,000 \$ 8,000	12,000	\$
				Area and Planter Drain at New Landscaping 1 new area drain- tie into existing storm line 1 new planter drain- tie into existing storm line	1 LS \$ 1,500 \$ 1,500 1 LS \$ 4,750 \$ 4,750 1 LS \$ 2,000 \$ 2,000		
				Provide sump pump at Lower Level Patio Remove brick and excavate for 36" diameter 5ft deep sump basin Provide new 36" dia., 5ft deep fiberglass basin Connect new perimeter drain to new basin (see B4 for foundation drainage)			
D-6	Storm						

Connect existing area drain to new sump basin Provide duplex (2 x 1HP) sump pumps with controller Provide new 2-1/2" force main and connect to existing storm below grade Patch/return existing brick and backfill pipe trench							1 LS \$ 1,000 \$ 1,000 1 LS \$ 10,000 \$ 10,000 1 LS \$ 2,000 \$ 2,000 1 LS \$ 2,500 \$ 2,500	23,750 \$	23,750 \$	136,700 \$	-
TOTAL PLUMBING SYSTEM								\$	164,470 \$	136,700 \$	
E. ELECTRICAL SYSTEM											
Category	System Type	Description				Floor Level		Room #			
E-1	Primary Electrical and Emergency System					Main	Ground				
		Electrical Service Upgrade				X		B03			
		Remove existing C/T Cabinet and service feeder Main Distribution Panel (MDP) and associated feeder. - Remove existing 400A/3ph Main Circuit Breakers serving Main Distribution Panel (MDP). Remove existing 400A/3ph Main Circuit Breakers serving the Chiller and associated feeder, and Remove existing 225A/3ph Main Circuit Breakers serving the Elevator and associated feeder. New C/T Cabinet and incoming service feeder New 400A/3B Main Circuit Breakers to serve new Main Distribution Panel (MDP) New 400A, 208/120V, 3-phase, 4-wire Main Distribution Panel (MDP) and associated feeder and branch circuit wiring. New 400A/3B Main Circuit Breakers to serve the existing Chiller and associated feeder. New 225A/3B Main Circuit Breakers serving the Elevator and associated feeder.									
		1 LS \$ 2,000 \$ 2,000 1 LS \$ 2,000 \$ 2,000									
		1 LS \$ 10,000 \$ 10,000 1 LS \$ 3,000 \$ 3,000 1 LS \$ 15,000 \$ 15,000									
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Provide new full cut-off LED pole mounted fixtures associated power and controls. Provide new full cut-off LED building mounted fixtures and associated power and controls.												20 EA 9 EA	\$ 4,500 \$ 350	\$ 90,000 \$ 3,150	\$ 118,050		\$	118,050
TOTAL ELECTRICAL SYSTEM																\$ 206,110	\$ -	\$ 118,050
F. FIRE PREVENTION SYSTEMS																		
Category	System Type	Description				Floor Level		Room #										
						Main	Ground											
F-1	Fire Alarm System	Upgrade Fire Alarm System Remove Fire Alarm system including FACP, associated fire alarm devices and wiring Provide new Fire Alarm system including associated fire alarm devices and wiring GSF of area										13595 SF	\$	5	\$ 67,975	\$ 67,975		
										1 LS	\$ 15,000	\$ 15,000						
										1 LS	\$ 25,000	\$ 25,000						
										15000 SF	\$ 3	\$ 45,000						
										1 LS	\$ 7,500	\$ 7,500						
										1 LS								
										1 LS								
										2 LS	\$ 2,500	\$ 5,000	\$ 97,500		\$ 97,500			
TOTAL FIRE PREVENTION SYSTEM																\$ 67,975	\$ -	\$ 97,500
G. SITE CONDITIONS																		
Category	System Type	Description				Location/Façade		Room #										
G-1	Parking Lot	Parking Lot Improvements Repair the existing surface cracks, assume 25% cracks (Total Asphalt Area 45,000 sf) Other ADA Improvements Accessible Parking related expenses										1 LS	\$ 22,500	\$ 22,500	\$ 22,500	\$ 22,500		
										1 LS	\$ 28,774	\$ 28,774	\$ 28,774					
G-2	Site Lighting Systems	Replace existing Light Fixtures - See E-5 Provide energy efficient LED exterior fixtures																
G-3	Sidewalks & Curb Cuts	Sidewalk and Curb Cut Improvements Replace worn out and cracked sidewalks. Replace sidewalk to meet ADA compliance. Provide curb ramps from the parking area to the sidewalks for building access. Redirect or extend existing stormwater pipe away from ADA side walk entry Retaining wall repairs Regrade landscaped areas/provide drainage Other ADA Improvements ADA Ramp Improvements Accessible Routes										1 LS	\$ 5,000	\$ 5,000				
										1 LS	\$ 20,000	\$ 20,000						
										1 LS	\$ 25,000	\$ 25,000	\$ 50,000	\$ 50,000				
										1 LS	\$ 42,095	\$ 42,095						
										1 LS	\$ 43,533	\$ 43,533	\$ 85,628	\$ 85,628				
G-4	Site Paving & Seating	Site Paving & Seating Improvements																

G-5	Existing Trees	Redesign the East side exterior seating area. Provide new exterior paving and seating.	1 LS	\$	5,000	\$	5,000	\$	25,000	\$	25,000									
			1 LS	\$	20,000	\$	20,000	\$	25,000	\$										
			1 LS	\$	25,000	\$	25,000													
			1 LS	\$	-	\$	-													
G-6	Stormwater Management	Improvements to existing Trees Landscape allowance Remove existing wood plant surround Provide adequate soil for root coverage around the root diameter. Provide wood mulch covering for proper tree maintenance. Cut down trees located close to the East and North building façade	1 LS	\$	-	\$	-				25,000									
			1 LS	\$	-	\$	-													
			1 LS	\$	-	\$	-													
			4 EA	\$	-	\$	-	25,000												
G-7 & G-8	Access from Public Transportation and Utility Locations & Terminations	See section 'A-2, Foundation / Waterproofing / Drainage' above No associated costs currently.																		
TOTAL SITE CONDITIONS															\$	236,902	\$	-	\$	-
H. SPECIAL AREAS																				
H-1	Restrooms	Restroom Improvements Complete Restroom Renovation Install new security Cameras on the Lower Level Miscellaneous ADA Improvements - Interior	Category	System Type	Description	Location/Façade	Room #													
								600 SF	\$	100	\$	60,000								
								1 EA	\$	2,500	\$	2,500	\$	62,500						
								1 LS	\$	23,709	\$	23,709	\$	23,709						
TOTAL SPECIAL AREAS															\$	86,209	\$	-	\$	-
I. SIGNAGE AND DISPLAY AREAS																				
I-1	Signage	Re-design and replace interior signage Remove existing signage Provide new graphic signage Re-design and replace exterior signage (sign elective) Monument Sign Electrical	Category	System Type	Description	Location/Façade	Room #													
								1 LS	\$	300	\$	300								
								30 EA	\$	200	\$	6,000	\$	6,300						
								1 LS	\$	65,000	\$	65,000								
								1 LS	\$	10,000	\$	10,000	\$	75,000						
I-2	Display Area	Display Improvements Remove existing obstructions to ADA door activators, interior glazed partitions, items displayed on mechanical units etc. Provide new display surfaces	Category	System Type	Description	Location/Façade	Room #													
								1 LS	\$	2,500	\$	2,500								
								1 LS	\$	5,000	\$	5,000	\$	7,500						
TOTAL MISCELLANEOUS															\$	88,800	\$	-	\$	-
TOTAL COST PER ASSESSMENT STAGE															\$	2,752,558	\$	354,394	\$	301,910

ALTERNATES									
ALT - 1A	A-1	Added cost to change from slate roof repair to replacement with metal							\$ 100,000
ALT - 1B	A-1	Added cost to change replace slate roof							\$ 300,000
ALT - 2	A-2	Added cost of new canopy over existing Areaway (North façade)						\$ 55,500	
ALT - 3	A-3	Cost Savings if Replace West Vestibule vs Repair Seals and Caulking							\$ 6,000
ALT - 4	C-8	Cost to Install VRF System							
		Demolish existing systems	X	X	All Rooms				
		Remove existing gas boiler unused piping and connections		X	G108				
		Remove existing chiller and associated piping	X		112				
		Remove existing unit ventilators and piping connections as required	X	X	103, 104, 105, G104				
		Remove existing fan coil units and existing piping connections as required	X		101, 103, 104, 105, 106, 113, 114A, 114B, 114C, 115				
		Remove existing air handling units (AHU-1 & AHU-2) and unused ductwork connections and transitions		X	G108				
		Remove existing exhaust fans and ductwork connections as required	X	X	107, G108, 115, 117				
		Remove existing circulation pumps and existing connected and unused piping		X	G108				
		Remove existing pneumatic and incompatible electric system components	X	X	G108				
		Remove existing thermostats and existing unused wires			All Rooms				
		Install variable refrigerant flow units	X	X	All Rooms				
		Install new indoor VRF units that are compatible with BACNet DDC controls and actuators (10) in approximately the same locations as existing fan coil units							
		Install new 60 ton outdoor VRF air cooled condensing unit (1) in existing chiller yard							
		Install refrigerant piping distribution							
		Install new refrigerant piping between outdoor condensing unit and indoor fan coil units	X	X	All Rooms				
		Install dedicated outside air unit							
		Install new 2500 CFM dedicated outside air unit compatible with BACNet DDC controls and re-use existing air distribution ductwork		X	G108				
		Install new DDC control system							
		Install new DDC thermostats and new wires as needed	X	X	All Rooms				
		Install new RH sensors in Ground level spaces		X	All Ground Level				
		Install new wires as needed for RH sensors		X	All Ground Level				
		Cost Saving of not repairing existing HVAC system							
ALT-5		New Design Item: to resolve current area of refuge issue New accessible exterior ADA Platform elevator		X					\$ 25,000

J-Appendices:

Section-2

ADA Survey: UDC, Inc.

Building Name: Chevy Chase Library
Address: 8005 Connecticut Avenue, Chevy Chase, MD 20815
Building No.: _____
Task Order No.: 17.004

Date of Survey: 9/19/2018
Surveyors: Maureen McKeron
Firm: Universal Designers & Consultants, Inc.

Date of Draft Report Submission: 10/10/2018
Date of Final Report Submission: _____

* Projected cost in 4 years (2022)

Line Item #	Location	Element	Photo	Non-Compliant Feature Description	Action	2010 Standards	1991 Standards	Unit	Unit Cost*	Qty	Estimated Cost*	Comment
1	Parking											
2	Connecticut Avenue Entrance	Accessible Parking - Slopes	334-340	At parking space P1, there are running slopes of 2.8 percent at the top of the space, 4.3 percent in the middle, and 2.9 percent at the bottom of the space.	Modify accessible spaces and access aisles to be sloped no more than 1:48 (2 percent) in any direction.	502.4	4.6.3	sf (concrete)	\$35	378	\$13,230	
3	Connecticut Avenue Entrance	Accessible Parking - Slopes	341-344	At access aisle A1, there are running slopes of 3.1 percent in the middle of the aisle, and 3.3 percent at the bottom of the aisle.								
4	Connecticut Avenue Entrance	Accessible Parking - Slopes	345-346	At parking space P2, there is a running slope of 4.1 percent at the bottom of the space.								
5	Connecticut Avenue Entrance	Accessible Parking - Signage	347	There is no signage designating the accessible parking spaces.	Provide upright sign(s) at each accessible parking space mounted at least 60 inches above the parking surface to the bottom of the sign.	502.6	4.1.2(7)(a) 4.6.4	space (standard sign on steel post)	\$212	2	\$424	
6	Rear Entrance	Accessible Parking - Slopes	272-273	At parking space P3, there is a cross slope of 2.4 percent at the bottom of the space.	Modify accessible spaces and access aisles to be sloped no more than 1:48 (2 percent) in any direction.	502.4	4.6.3	sf (concrete)	\$35	432	\$15,120	
7	Rear Entrance	Accessible Parking - Slopes	274-277	At parking space P4, there are cross slopes of 2.2 percent at the top and at the bottom of the space.								
8	Rear Entrance	Accessible Parking - Slopes	278-279	At parking space P6, there is a running slope of 2.7 percent at the top of the space.								
9	General	Accessible Parking - Quantity	...	There are a total of 101 parking spaces provided at the library site. There are 7 accessible parking spaces provided, and 2 of the accessible parking spaces are designated as van accessible.	For information purposes only. For a parking facility with 101 total parking spaces, 5 accessible parking spaces are required. Per 07B.(3)(a) of the Maryland Accessibility Code, 1 in every 4 accessible parking space must be a van accessible parking space.	208.2	4.1.2(5)(a)	...	...	...	...
10	Exterior Accessible Routes											
11	Connecticut Avenue Entrance	Curb Ramp	350, 353-357	The curb ramp at the accessible parking spaces has a running slope of 8.4 percent at the top of the ramp. There is no landing provided at the top of the ramp, but flares at the curb ramp are sloped less than 8.3 percent.	Either modify the existing curb ramp to be sloped 1:12 (8.3 percent) maximum in the direction of travel, and maintain flares sloped 1:12 maximum, OR: Replace existing curb ramp with a parallel type curb ramp, with bottom landing sloped 1:48 (2 percent in all directions and ramped portion sloped 1:12 (8.3 percent) maximum in the direction of travel.	406	4.7	ea (concrete)	\$2,568	1	\$2,568	

Line Item #	Location	Element	Photo	Non-Compliant Feature Description	Action	2010 Standards	1991 Standards	Unit	Unit Cost*	Qty	Estimated Cost*	Comment
12	Connecticut Avenue Entrance	Curb Ramp	350	The curb ramp does not have detectable warnings. Detectable warnings are provided at other locations throughout the site.	For informational purposes only. The 2010 ADA Standards do not require detectable warnings along exterior accessible routes, though they may be required by other local codes or by the Department of Transportation. We recommend that where detectable warnings are provided at a site, they be installed consistently at all locations where pedestrian routes cross or adjoin vehicular ways and a curb or other barrier is not provided.	705	4.7.7 4.29	....	...	...	...
13	Connecticut Avenue Entrance	Ramp - Handrail Extensions	362, 366	The right side handrail extension at the bottom landing of the ramp does not extend in the same direction as the ramp run (turns), and is 11 inches long.	Provide a 12 inches long minimum handrail extension, extending in the same direction as the ramp run.	405.8 505.10	4.8.5 4.26	each extension	\$1,328	1	\$1,328	
14	Connecticut Avenue Entrance	Ramp - Handrail Height	364, 367	The right side handrail is 33-1/2 inches high to the top gripping surface, as measured at the intermediate landing. Note: Handrail height does not appear to be consistent along the length of the handrail on the right side. At the top of the ramp, the handrail was measured at 34-1/2 inches high.	Relocate handrails to be located between 34 inches minimum and 38 inches maximum vertically above ramp surface as measured to the gripping surface.	405.8 505	4.8.5 4.26	per lf (standing pipe rail)	\$65	75	\$4,875	
15	Connecticut Avenue Entrance	Ramp - Handrail Extensions	369-370	The left side handrail extension does not extend in the same direction as the ramp run (turns).	Provide a 12 inches long minimum handrail extension, extending in the same direction as the ramp run.	405.8 505.10	4.8.5 4.26	each extension	\$834	1	\$834	
16	Connecticut Avenue Entrance	Accessible Route - Slopes	374-376	At the route to the book drop, there is a cross slope of 2.7 percent at the turn towards the book drop alcove.	Regrade accessible route to eliminate cross slopes greater than 1:48 (2 percent).	206.2.1 206.2.2 403.3	4.1.2(1) 4.1.2(2) 4.3.7	sf (concrete)	\$35	25	\$875	
17	Connecticut Avenue Entrance	Book Drop - Alcove	377-381, 384	The book deposit is located in an alcove, 60 inches deep overall. The width of the alcove is reduced by 3 pipes. These pipes reduce the width of the alcove to as narrow as 30 inches. The clear floor space at the book deposit is sloped 3.2 percent.	Either modify the existing book deposit location to provide 36 inches wide minimum clear width along the entire depth of the alcove, with clear floor space sloped 1:48 (2 percent) maximum in all directions. OR: Move book deposit to another location, where it is on an accessible route, has operable parts within reach range, and is adjacent to a clear floor space.	305.2 305.7.2	4.2.4.2 4.5	undetermined				
18	Connecticut Avenue Entrance	Curb Ramp - Transition	393-394	At the route to the public sidewalk at Connecticut Avenue, the curb ramp at the crosswalk has an abrupt level change 1 inch high at the bottom.	Grind or modify the curb ramp lip to provide a flush transition.	406.2	4.7.2	ea	\$273	1	\$273	
19	Connecticut Avenue Entrance	Accessible Route - Slopes	395-398	At the route to the public sidewalk at Connecticut Avenue, there is a cross slope of 3.7 percent at the last sidewalk section before the public sidewalk, and a cross slope of 4.6 percent at the intersection between the public sidewalk at the route to the library.	Regrade accessible route to eliminate cross slopes greater than 1:48 (2 percent).	206.2.1 206.2.2 403.3	4.1.2(1) 4.1.2(2) 4.3.7	sf (concrete)	\$35	84	\$2,940	

Line Item #	Location	Element	Photo	Non-Compliant Feature Description	Action	2010 Standards	1991 Standards	Unit	Unit Cost*	Qty	Estimated Cost*	Comment
20	Meeting Room Exit (Sunken Patio)	Curb Ramp - Slopes	416-420	There is a curb ramp at the exterior of the emergency exit door from the meeting room. The curb ramp is deteriorating, and has a running slope of 11.2 percent. There is no landing provided at the top of the curb ramp. This appears to be the only exit to the exterior from the lower level of the library. Stairs connect the exterior patio to grade level.	§207 of the 2010 ADA Standards requires that accessible means of egress comply with to the 2000 or 2003 editions of the International Building Code. Section 1007.1, Exception 1 of the 2003 IBC states that accessible means of egress are not required in alterations to existing buildings. We recommend providing an accessible curb ramp with landing at the exterior side of the emergency exit door.	207	4.3.10	ea (concrete)	\$2,568	1	\$2,568	
21	Rear Entrance - Bench Seating	Accessible Route - Abrupt Level Change	286-288	At the route through the bench seating area at the left of the entrance, there is an abrupt level change 1 inch high.	Grind or modify abrupt changes in level greater than 1/4 inch in height to create a gradual transition.	206.2.1 206.2.2 303 403.4	4.1.2(1) 4.1.2(2) 4.1.2(4) 4.3.8 4.5.2	each	\$273	1	\$273	There is no requirement that bench seating be accessible, however at least 1 bench seating area must be on an accessible route. We recommend providing a clear floor space adjacent to at least 1 of the provided benches, so that an individual in a wheelchair can sit next to a companion at a bench.
22	Rear Entrance - Bench Seating	Accessible Route - Slopes	288-292	At the route through the bench seating area at the left of the entrance, there are cross slopes of 2.9 percent and 3.0 percent.	Regrade accessible route to eliminate cross slopes greater than 1:48 (2 percent).	206.2.1 206.2.2 403.3	4.1.2(1) 4.1.2(2) 4.3.7	sf (concrete)	\$35	72	\$2,520	There is no requirement that bench seating be accessible, however at least 1 bench seating area must be on an accessible route. We recommend providing a clear floor space adjacent to at least 1 of the provided benches, so that an individual in a wheelchair can sit next to a companion at a bench.
23	Rear Entrance - Bench Seating	Accessible Route - Gaps	293-296	At the right side of the entrance, there is a bench seating area. This area has stone pavers. The pavers have settled over time, creating gaps greater than 1/2 inch wide and abrupt level changes greater than 1/4 inch high.	There is no requirement that bench seating be accessible, however at least 1 bench seating area must be on an accessible route. We recommend providing a clear floor space adjacent to at least 1 of the provided benches, so that an individual in a wheelchair can sit next to a companion at a bench.	206.2.2	4.1.2(2)	undetermined				
24	Rear Entrance	Accessible Route - Slopes	297-331	At the route connecting the rear entrance to the sidewalk at Dunlop Avenue, there are non-compliant cross slopes ranging from 2.3 percent to 7.2 percent. This occurs along the entire length of the route from the accessible parking to Dunlop Avenue. Additionally, there are abrupt level changes and gaps along the route to Dunlop Avenue.	Regrade accessible route to eliminate cross slopes greater than 1:48 (2 percent). Assure any abrupt level changes are 1/4 inch high maximum and any gaps are 1/2 inches wide maximum.	206.2.1 206.2.2 303 302 403.3	4.1.2(1) 4.1.2(2) 4.3.7 4.5.2 4.5.4	sf (concrete)	\$35	1,080	\$37,800	

Line Item #	Location	Element	Photo	Non-Compliant Feature Description	Action	2010 Standards	1991 Standards	Unit	Unit Cost*	Qty	Estimated Cost*	Comment
25	Passenger Loading/Drop-off Area											
26	Connecticut Avenue Entrance	Passenger Loading Zone	400-414	At the front (Connecticut Avenue) entrance to the library, there is a driveway that functions as a drop-off and loading zone for patrons. The book drop is also located at this entrance. There is no accessible passenger loading zone in this area. Slopes at the vehicular pull-up area are 3.0 percent to 4.2 percent, parallel to the curb, along the entire length of the driveway/loading area. Tree branches overhang the driveway.	Provide an accessible loading zone, per §209 and §503 of the 2010 ADA Standards. Accessible passenger loading zones must be 20 feet long minimum, with vehicular pull-up space 8 feet wide and marked access aisle 5 feet wide. The vehicular pull-up space and access aisle must have slopes 1:48 (2 percent maximum) in all directions. Vertical clearance 114 inches high minimum must be maintained along the entire length of the accessible passenger loading zone and vehicular routes serving the loading zone.	209 503	4.1.2.(5)(c) 4.6.6	undetermined				
27	Entrances											
28	Connecticut Avenue Entrance	Door - Threshold	146-147 149-150	At the automatic door leaf at the exterior door, the threshold is 3/4 inch high adjacent to the hinge, due to settling of the grout. There is cracking of the tile at the threshold, creating gaps at the threshold.	Replace or modify the threshold to have a maximum abrupt vertical level change of 1/4 inch with a maximum overall rise of 1/2 inch sloped 1:2 maximum.	404.2.5	4.13.8	door	\$221	1	\$221	
29	Connecticut Avenue Entrance	Door - Automatic Operator	151 - 153	The push button at the interior vestibule area, to operate the exterior automatic door leaf, was not working at the time of the survey.	Maintain accessible features in operable working condition.	28 CFR 35.133	28 CFR 35.133	Operations	\$0	1	\$0	
30	Connecticut Avenue Entrance	Door - Push Side Smooth Surface	152, 156, 160	The push side smooth surface at both the interior and exterior entry doors is 6-3/4 inches high.	Provide a 10 inches minimum AFF kick plate or smooth surface along the full width of the push side of the door.	404.2.10	...	door	\$343	1	\$343	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.
31	Rear Entrance	Door - Push Side Smooth Surface	169, 172	The push side smooth surface at both the interior and exterior entry doors is 8-1/2 inches high.	Provide a 10 inches minimum AFF kick plate or smooth surface along the full width of the push side of the door.	404.2.10	...	door	\$343	1	\$343	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.
32	Rear Entrance	Door - Hardware Height	170	The exit push plate at the exterior doors is 49-1/4 inches high.	Lower controls to 34 inches minimum to 48 inches high maximum.	404.2.7	4.13.9	each	\$561	1	\$561	
33	Interior											
34	Lower Level	Fire Extinguisher	98-100	The fire extinguisher cabinet outside the meeting room entry door has a handle at 66 inches above the finish floor surface.	Provide fire extinguisher with accessible cabinet hardware 48 inches high maximum AFF.	205 309	4.27	Operations	\$0	1	\$0	
35	Lower Level Meeting Room	Door - Maneuvering Clearance	101-103	At the pull side of the door to the meeting room, there is 11-5/8 inches wide maneuvering clearance at the latch side.	Modify the doorway and/or adjacent walls to provide pull side maneuvering clearance for a forward approach which is 18 inches wide minimum past the latch and 60 inches deep minimum.	404.2.4	4.13.6	door (mtl/wood)	\$4,811	1	\$4,811	
36	Lower Level Meeting Room	Door - Opening Force & Closing Speed	104	The door has an opening force of 7 pounds and a closing speed of 4 seconds.	Adjust door closer to provide a maximum 5 pounds of force and 5 seconds minimum closing speed from an open position of 90 degrees to a position 12 degrees from the latch.	404.2.8.1 404.2.9	4.13.10 4.13.11	Operations	\$0	1	\$0	

Line Item #	Location	Element	Photo	Non-Compliant Feature Description	Action	2010 Standards	1991 Standards	Unit	Unit Cost*	Qty	Estimated Cost*	Comment
37	Lower Level Meeting Room	Door - Push Side Smooth Surface	104-105	There is a door prop located within 10 inches of the bottom of the push side of the door.	Provide a 10 inches minimum AFF kick plate or smooth surface along the full width of the push side of the door.	404.2.10	...	door	\$343	1	\$343	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.
38	Lower Level Meeting Room	Light Switch - Height	426-430	Switches for the main overhead lights are 52-1/2 inches AFF. Switches for the side lights and the exhaust fan are 53-3/4 inches AFF.	Lower the light switch to 48 inches high maximum to the highest operable part.	308	4.2.5 4.2.6	each	\$319	1	\$319	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.
39	Lower Level Meeting Room	HVAC Switch - Height	429	The switch for the HVAC is located 69 inches AFF.	Lower the switch to 48 inches high maximum to the highest operable part.	308	4.2.5 4.2.6	each	\$319	1	\$319	
40	Lower Level Meeting Room	Outlets - Height	451	Outlets are located with top plug 13-3/4 inches AFF.	Relocate outlets to be 15 inches minimum to 48 inches maximum AFF.	308	4.2.5	each	\$481	1	\$481	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.
41	Lower Level Meeting Room	Fire Extinguisher	437-438	The wall-mounted fire extinguisher adjacent to the emergency exit door is located 52-1/2 inches AFF to the top.	Provide fire extinguisher that can be disengaged from the wall at 48 inches high maximum AFF.	205 309	4.27	Operations	\$0	1	\$0	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.
42	Lower Level Meeting Room	Sink - Knee & Toe Clearance	442-443, 448	The lip of the sink is 34-1/4 inches AFF. A forward approach with knee and toe clearance is not provided at the sink.	Modify the lavatory to provide 34 inches high maximum top height with 30 inches wide by 27 inches high by 8 inches deep knee clearance and 9 inches high by 30 inches wide by 17 inches deep toe clearance to allow frontal approach.	213.3.4 305.4 306 606.2	4.22.6 4.19.2 Fig. 31 Fig. 32	each	\$1,947	1	\$1,947	
43	Lower Level Meeting Room	Switches - Height	444-447	Switches at the rear of the sink are located 56 inches and 61 inches AFF.	Lower switches so that they are in reach range for a forward or side approach to the counter.	308	4.2.5 4.2.6	each	\$273	2	\$546	
44	Lower Level Meeting Room	Phone - Height	449	The phone is located 55 inches AFF to the highest control.	Lower phone to 48 inches high maximum to top controls or buttons.	308	4.2	each	\$319	1	\$319	
45	Connecticut Avenue Entry Vestibule	Brochure Racks - Height	154-155	The brochure racks in the vestibule area are as high as 73 inches AFF.	Provide at least 1 of each type of brochure within reach range, 15 inches minimum to 48 inches maximum AFF.	308	4.2	Operations	\$0	1	\$0	
46	Connecticut Avenue Entry Vestibule	Fire Alarm Pull	154	The fire alarm pull in the vestibule is 49 inches high, and is located over a bench that is 12 inches deep.	Lower fire alarm pull stations to 48 inches high maximum (42 inches maximum preferred). Note that where reach is required over objects more than 10 inches deep, elements must be located 46 inches high maximum.	308	4.2	device	\$441	1	\$441	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.
47	Lobby	Fire Alarm Pull	174-175	The fire alarm pull in the lobby is 48-3/4 inches high.	Lower fire alarm pull stations to 48 inches high maximum (42 inches maximum preferred).	308	4.2	device	\$441	1	\$441	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.

Line Item #	Location	Element	Photo	Non-Compliant Feature Description	Action	2010 Standards	1991 Standards	Unit	Unit Cost*	Qty	Estimated Cost*	Comment
48	Check-Out	Counter - Height	177-181	The curved portion of the check-out counter is 36-1/8 inches high. A touchscreen is used for patron transactions. The touchscreen is located 13-1/2 inches from the front edge of the 36-1/8 inches high counter, and is 43-1/8 inches high to the top of the screen.	Modify the counter to be 34 inches high maximum and 36 inches wide minimum, for a parallel approach to the counter. The counter must be 34 inches high to allow for accessible reach to the touchscreen payment device.	904 308.3.2	7.2	each	\$1,759	1	\$1,759	
49	Self Check-Out	Touchscreen - Height	182	The self check-out touchscreen is located on a 31-1/4 inches high counter, with the top of the screen 53-7/8 inches AFF. The screen is approximately 13 inches from the front edge of the counter.	Provide touchscreen with top operable portion 48 inches high maximum. Note that where reach is required over objects more than 10 inches deep, elements must be located 46 inches high maximum.	308	4.2	Operations	\$0	1	\$0	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.
50	Children's Area	Emergency Exit - Signage	184	There is no tactile signage at the emergency exit door.	Provide exit signage that is high contrast, non-glare, sans serif, tactile (raised characters and braille) stock signage on the wall at the strike side of the door (right side of double doors). Mount sign so that tactile characters are located 48 inches minimum measured from the baseline of the lowest tactile character and 60 inches maximum from the baseline of the highest tactile character. Locate the sign 9 inches minimum from the edge of the door to the centerline of the tactile characters.	703	...	each	\$116	1	\$116	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.
51	Children's Area	Emergency Exit - Door Maneuvering Clearance	184-187	The emergency exit door is recessed 20 inches at the latch side of the door, from the door face to the outside face of the HVAC unit.	Modify door so that the required push side maneuvering clearance is not located more than 8 inches from the face of the door.	404.2.4.3	...	door (mtl/wood)	\$4,811	1	\$4,811	
52	Children's Area	Fire Alarm Pull	187-188	The fire alarm pull in the children's area is 49 inches high.	Lower fire alarm pull stations to 48 inches high maximum (42 inches maximum preferred).	308	4.2	device	\$441	1	\$441	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.
53	Fiction/Non-Fiction	Accessible Route - Clear Width	203-207	At the Non-Fiction area, the width between bookcases is 35-3/4 inches at aisle '741-748'. At the Fiction area, the width between bookcases is 35 1/4 inches at aisle 'MCC-PER'.	Relocate furniture to provide a 36 inches wide minimum (32 inches allowed for distances not exceeding 24 inches) accessible route through the area.	402	4.3	Operations	\$0	2	\$0	
54	Young Adult Area	Emergency Exit - Door Maneuvering Clearance	210-215	The emergency exit door is recessed 20-1/2 inches at the latch side of the door, from the door face to the outside face of the bookcase. The door is recessed 10-3/4 inches to the outside face of the wall at the hinge side of the door.	Modify door so that the required push side maneuvering clearance is not located more than 8 inches from the face of the door.	404.2.4.3	...	door (mtl/wood)	\$4,811	1	\$4,811	
55	Young Adult Area	Emergency Exit - Signage	216	There is no tactile signage at the emergency exit door.	Provide exit signage that is high contrast, non-glare, sans serif, tactile (raised characters and braille) stock signage on the wall at the strike side of the door (right side of double doors). Mount sign so that tactile characters are located 48 inches minimum measured from the baseline of the lowest tactile character and 60 inches maximum from the baseline of the highest tactile character. Locate the sign 9 inches minimum from the edge of the door to the centerline of the tactile characters.	703	...	each	\$116	1	\$116	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.

Line Item #	Location	Element	Photo	Non-Compliant Feature Description	Action	2010 Standards	1991 Standards	Unit	Unit Cost*	Qty	Estimated Cost*	Comment
56	Young Adult Area	Fire Alarm Pull	217-218	The fire alarm pull in the young adult area is 48-1/2 inches high.	Lower fire alarm pull stations to 48 inches high maximum (42 inches maximum preferred).	308	4.2	device	\$441	1	\$441	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.
57	Young Adult Area	Outlets - Height	219-221	Outlets in this area are located at the base of shelving or at floor receptacles. Floor receptacles were being used to power patron laptops.	Relocate outlets to be 15 inches minimum to 48 inches maximum AFF.	308	4.2.5	each	\$481	TBD	\$481	
58	Study Room	Door - Push Side Smooth Surface	222-223	There is a door prop located within 10 inches of the bottom of the push side of the door.	Provide a 10 inches minimum AFF kick plate or smooth surface along the full width of the push side of the door.	404.2.10	...	door	\$343	1	\$343	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.
59	Study Room	Door - Opening Force & Closing Speed	223	The door has an opening force of 7 pounds and a closing speed of 3 seconds.	Adjust door closer to provide a maximum 5 pounds of force and 5 seconds minimum closing speed from an open position of 90 degrees to a position 12 degrees from the latch.	404.2.8.1 404.2.9	4.13.10 4.13.11	Operations	\$0	1	\$0	
60	Study Room	Door - Maneuvering Clearance	224	The pull side maneuvering clearance is 38-5/8 inches deep to the bookcase.	Relocate furniture to provide 54 inches deep maneuvering clearance for a latch approach to the pull side of the door.	404.2.4	4.13.6	Operations	\$0	2	\$0	
61	Study Room	Tables - Knee & Toe Clearance	225	The tables provided in the study room have an apron at 26-3/4 inches AFF.	Provide at least 1 accessible work surface that is 34 inches high maximum AFF to the top surface with 27 inches high by 17 inches deep by 30 inches wide minimum knee/toe clearance.	226.1	5.1	each	\$423	1	\$423	
62	Stair											
63	Stair	Handrail - Extension	133-134	At the top landing of the stair, the handrail extension that turns toward the window wall is 9 inches long.	Provide handrail extensions that are 12 inches long minimum at both sides of the top of the stair.	505.10.2 505.10.3	4.9.4(2)	each extension	\$1,328	1	\$1,328	
64	Stair	Emergency Exit - Door Push Side Smooth Surface	134, 136	The bottom push side smooth surface is 6-1/2 inches high.	Provide a 10 inches minimum AFF kick plate or smooth surface along the full width of the push side of the door.	404.2.10	...	door	\$343	1	\$343	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.
65	Stair	Emergency Exit - Door Threshold	137	The door threshold is 1 inch high overall at the exterior, and 3/4 inch high overall at the interior.	Replace or modify the threshold to have a maximum abrupt vertical level change of 1/4 inch with a maximum overall rise of 1/2 inch sloped 1:2 maximum.	404.2.5	4.13.8	door	\$221	1	\$221	
66	Stair	Emergency Exit - Door Maneuvering Clearance	139-141	The push side door maneuvering clearance is 6-1/2 inches wide at the latch side, to the handrail base, and 12 inches wide, to the edge of the top step. The door has both a closer and a latch.	Install an automated power operator with push button control. The clear floor space adjacent to the control (centered on the control recommended) must be located beyond the arc of the door swing. Assure automatic and power-assisted doors and gates comply with provisions found in ANSI/BHMA A156.10 [(ANSI/BHMA A156.19 for low-energy doors)]. Use of an automatic door operator eliminates the requirement for maneuvering clearance space at both sides of the door, provided that the door has standby power, or that it remains open in the power-off condition.	404.3	4.13.12	exterior door (entrance door)	\$13,108	1	\$13,108	

Line Item #	Location	Element	Photo	Non-Compliant Feature Description	Action	2010 Standards	1991 Standards	Unit	Unit Cost*	Qty	Estimated Cost*	Comment
67	Elevator											
68	Elevator Car	Size	113-115	The elevator car is 68-1/2 inches wide overall between the car wall panels. There are metal grab panels at either side of the car that reduce the overall width by 3-1/2 inches at either side.	The elevator car size is compliant per 2010 ADA Standards 407.4.1, as measured to the interior wall panels of the car. We recommend modifying or removing the grab bar panels at the car interior as, due to their atypical size, they effectively reduce the overall width of the elevator car to 61-1/2 inches, which is non-compliant.	407.4.1	4.10.9	Operations	\$0	1	\$0	
69	Elevator Car	Phone - Door Hardware	116-120	The hardware on the door to the emergency phone required tight grasping to operate.	Provide a loop or other accessible type pull handle on the door to the emergency communication device.	309	4.27	door	\$169	1	\$169	
70	Drinking Fountains											
71	Lower Level	Drinking Fountain	95-97	There is a single drinking fountain provided in the corridor outside the restrooms, with the spout at 36-1/2 inches AFF. Knee and toe clearance is not provided at the drinking fountain.	Either remove drinking fountain or provide a minimum of 2 drinking fountains. One accessible low drinking fountain and one high drinking fountain for standing individuals must be provided. The existing fountain does meet the criteria for an accessible high or low fountain.	211.2 602	4.1.3(10)	each double unit	\$8,794	1	\$8,794	
72	Restrooms											
73	Unisex Restroom	Signage	1	The white coloring on the raised letters of the sign is coming off.	Provide signage that is high contrast, non-glare, sans serif, tactile (raised characters and braille) stock signage on the wall at the strike side of the door (right side of double doors). Mount sign so that tactile characters are located 48 inches minimum measured from the baseline of the lowest tactile character and 60 inches maximum from the baseline of the highest tactile character. Locate the sign 9 inches minimum from the edge of the door to the centerline of the tactile characters. Maintain a clear floor space 18 inches by 18 inches minimum, centered on the tactile characters and beyond the swing of any door.	216.2 703.1 703.2 703.5 703.6	4.1.3(16)(a) 4.30.1 4.30.4 4.30.5 4.30.6	each (wall mount)	\$116	1	\$116	
74	Unisex Restroom	Door - Hardware	4, 12, 18	The door has a twist-type lock at the lever handle at the interior of the restroom. There is also a "Push to Lock" button adjacent to the automatic door operator button at the interior of the restroom. Neither locking mechanism actually worked in locking the restroom door at the time of the survey.	Maintain accessible features in operable working condition.	28 CFR 35.133	28 CFR 35.133	Operations	\$0	1	\$0	
75	Unisex Restroom	Door - Maneuvering Clearance	1-3, 6-11	The pull side maneuvering clearance at the door is 55-1/2 inches deep to shelving. The door is recessed 12 inches at the push side.	There is currently an automatic door operator provided at the door. Use of an automatic door operator eliminates the requirement for maneuvering clearance space at both sides of the door, provided that the door has standby power, or that it remains open in the power-off condition.	404.3	4.13.12	---	---	---	---	
76	Unisex Restroom	Door - Maneuvering Clearance Slopes	14-16	The floor at the pull side of the door slopes up to the threshold at 13.0 percent, for a distance of approximately 9-1/2 inches.	Modify the door maneuvering space to be level (maximum slope of 1:48 (2 percent) in any direction).	404.2.4	4.13.6	sf (concrete)	\$35	25	\$875	

Line Item #	Location	Element	Photo	Non-Compliant Feature Description	Action	2010 Standards	1991 Standards	Unit	Unit Cost*	Qty	Estimated Cost*	Comment
77	Unisex Restroom	Light Switch Height	17-18	The top of the light switch is 53-5/8 inches AFF.	Lower the light switch to 48 inches high maximum to the highest operable part.	308	4.2.5 4.2.6	each	\$319	1	\$319	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.
78	Unisex Restroom	Turning Space	19-22	The overall width of the restroom is 58-1/4 inches. Turning space is not provided.	Modify walls to provide an unobstructed 60 inches minimum diameter turning circle or T-shaped turning space.	304 603.2.1	4.2.3 4.22.3	undetermined				
79	Unisex Restroom	Button - Protruding Object	23-25	The "Push to Lock" button projects 4-1/4 inches from the wall at 45 inches AFF.	Modify button such that it is not a protruding object or provide a detectable element below, at 27 inches maximum AFF.	307.2	4.4.1	Operations	\$0	1	\$0	
80	Unisex Restroom	Lavatory - Height	31, 41	The lavatory rim height is 34-1/8 inches AFF.	Modify the lavatory to provide 34 inches high maximum top height with 30 inches wide by 27 inches high by 8 inches deep knee clearance and 9 inches high by 30 inches wide by 17 inches deep toe clearance to allow frontal approach.	213.3.4 305.4 306 606.2	4.22.6 4.19.2 Fig. 31 Fig. 32	each	\$1,947	1	\$1,947	
81	Unisex Restroom	Lavatory - Pipes	32	The lavatory pipes are not covered.	Insulate the supply and drainage pipes under the lavatory.	213.3.4 606.5	4.19.4 4.22.6	each sink	\$83	1	\$83	
82	Unisex Restroom	Rear Wall Grab Bar	33-34, 37	The rear wall grab bar extends 11-1/4 inches from the water closet centerline towards the side wall.	Provide a 36-inch long minimum horizontal rear wall grab bar, mounted at 33 inches minimum to 36 inches maximum AFF to the top of the gripping surface and extending from the centerline of the water closet 12 inches minimum toward the rear side wall and 24 inches minimum in the opposite direction. Assure 12 inches minimum clearance above and 1-1/2 inches minimum clearance below the grab bar. Assure the clearance between the wall and grab bar is 1-1/2 inches.	604.5.2 609	4.16.4 4.26 Fig. 29	each	\$294	1	\$294	
83	Unisex Restroom	Rear Wall Grab Bar - Clearance	35-37	The clearance between the grab bar and the wall is reduced to 1-1/8 inches by the automatic flush sensor plate. Note: the automatic flush controls appear to be disabled; manual flush control is provided.	Relocate sensor plate so that it is not behind the grab bar, nor within 12 inches above or 1-1/2 inches below the grab bar.	609.3	4.26.2	Operations	\$0	1	\$0	
84	Unisex Restroom	Side Wall Grab Bar	38-39	The side wall grab bar extends 53-1/4 inches overall from the rear wall.	Provide a 42-inch long minimum horizontal side wall grab bar mounted at 33 inches minimum to 36 inches maximum AFF to the top of the gripping surface, located 12 inches maximum measured from the rear wall and extending 54 inches minimum from the rear wall. Assure 12 inches minimum clearance above and 1-1/2 inches minimum clearance below the grab bar. Assure the clearance between the wall and grab bar is 1-1/2 inches.	604.5.1 609	4.16.4 4.26 Fig. 29	each	\$294	1	\$294	

Line Item #	Location	Element	Photo	Non-Compliant Feature Description	Action	2010 Standards	1991 Standards	Unit	Unit Cost*	Qty	Estimated Cost*	Comment
85	Women's Restroom	Signage	452-453	The restroom signage does not have raised characters or braille.	Provide signage that is high contrast, non-glare, sans serif, tactile (raised characters and braille) stock signage on the wall at the strike side of the door (right side of double doors). Mount sign so that tactile characters are located 48 inches minimum measured from the baseline of the lowest tactile character and 60 inches maximum from the baseline of the highest tactile character. Locate the sign 9 inches minimum from the edge of the door to the centerline of the tactile characters. Maintain a clear floor space 18 inches by 18 inches minimum, centered on the tactile characters and beyond the swing of any door.	216.2 703.1 703.2 703.5 703.6	4.1.3(16)(a) 4.30.1 4.30.4 4.30.5 4.30.6	each (wall mount)	\$116	1	\$116	
86	Women's Restroom	Door - Clear Width	463-464	The door clear open width is 31 inches.	Widen door to provide a 32 inches wide minimum net clear opening.	404.2.3	4.13.4 4.13.5	interior door (metal)	\$3,011	1	\$3,011	
87	Women's Restroom	Door - Opening Force & Closing Speed	452	The door has an opening force of 9 pounds and a closing speed of 3 seconds.	Adjust door closer to provide a maximum 5 pounds of force and 5 seconds minimum closing speed from an open position of 90 degrees to a position 12 degrees from the latch.	404.2.8.1 404.2.9	4.13.10 4.13.11	Operations	\$0	1	\$0	
88	Women's Restroom	Door - Maneuvering Clearance	455-456 465-467	The pull side maneuvering clearance at the door is 17-1/2 inches wide to the hand dryer and 49-5/8 inches to the stall partition. The door has both a closer and a latch.	Modify the doorway and/or adjacent partitions to provide pull side maneuvering clearance for a latch approach to a door with a closer, which is 24 inches wide minimum past the latch and 54 inches deep minimum.	404.2.4	4.13.6	door (mtl/wood)	\$4,811	1	\$4,811	
89					OR: Install an automated power operator with push button control. The clear floor space adjacent to the control (centered on the control recommended) must be located beyond the arc of the door swing. Assure automatic and power-assisted doors and gates comply with provisions found in ANSIBHMA A156.10 [[ANSIBHMA A156.19 For low-energy doors]]. Use of an automatic door operator eliminates the requirement for maneuvering clearance space at both sides of the door, provided that the door has standby power, or that it remains open in the power-off condition.	404.3	4.13.12	exterior door (entrance door)	\$13,108	1	\$13,108	
90	Women's Restroom	Door - Threshold	454	The door threshold is 1 inch overall, with an abrupt portion 1/2 inch high at the exterior (corridor) side of the threshold.	Replace or modify the threshold to have a maximum abrupt vertical level change of 1/4 inch with a maximum overall rise of 1/2 inch sloped 1:2 maximum.	404.2.5	4.13.8	door	\$221	1	\$221	
91	Women's Restroom	Light Switch - Height	456, 468	The top of the light switch is 55 inches AFF.	Lower the light switch to 48 inches high maximum to the highest operable part.	308	4.2.5 4.2.6	each	\$319	1	\$319	
92	Women's Restroom	Dryer - Protruding Object	456, 469	The hand dryer projects 7 inches at 40-1/2 inches AFF.	Relocate hand dryer to a position where it is not a protruding object.	307.2	4.4.1	Operations	\$0	1	\$0	
93					OR: Replace hand dryer with unit that projects 4 inches maximum from the wall surface.	307.2	4.4.1	each	\$127	1	\$127	

Line Item #	Location	Element	Photo	Non-Compliant Feature Description	Action	2010 Standards	1991 Standards	Unit	Unit Cost*	Qty	Estimated Cost*	Comment
94	Women's Restroom	Baby Changing Station	470-473	The grip at the upper corner of the baby changing station is 49-3/4 inches AFF. The rim of the open changing surface is 34-1/8 inches AFF.	Provide baby changing station with pull down handle no higher than 48 inches and a surface/lip height at or below 34 inches with at least 27 inches high knee clearance when open.	305 308	4.2.4 4.2.5 4.2.6 4.22.7 4.27.2	unit	\$591	1	\$591	
95	Women's Restroom	Lavatory - Pipes	462	The lavatory pipes are not covered.	Insulate the supply and drainage pipes under the lavatory.	213.3.4 606.5	4.19.4 4.22.6	each sink	\$83	1	\$83	
96	Women's Restroom	Accessible Stall - None Provided	460-461	There is no wheelchair accessible stall provided in the restroom. There is an ambulatory type stall provided. See findings for ambulatory stall below. Note that an ambulatory stall is not an acceptable alternative to a wheelchair accessible toilet stall, and that an ambulatory stall is not required based on the current fixture count.	Provide an accessible women's restroom with a wheelchair accessible toilet stall.	213.2	4.1.3(11)	undetermined				The existing women's toilet room dimensions appear unlikely to accommodate a wheelchair accessible stall without elimination of the second toilet fixture, essentially creating a single user restroom. It may be possible to create accessible men's and women's multi-user toilet rooms by switching the men's and women's toilet room locations (the existing men's toilet room is larger).
97	Women's Restroom	Ambulatory Stall - Width	474-475	The ambulatory stall is 37-1/2 inches wide.	Modify ambulatory stall to be 35 inches minimum and 37 inches wide maximum.	604.8.2.1	4.22.4	partition	\$1,665	1	\$1,665	
98	Women's Restroom	Ambulatory Stall - Water Closet Centerline	476-477	The water closet centerline is 15-1/4 inches from the side wall.	In the ambulatory stall, relocate the water closet to be centered 17 inches to 19 inches from the side wall.	604.2	4.17.3 Fig. 30(b)	each wall hung	\$2,556	1	\$2,556	
99	Women's Restroom	Ambulatory Stall - Hardware	479-480	Pull hardware is provided at the pull (exterior) side of the stall door only.	Install pull handles on both sides of the ambulatory toilet compartment door.	604.8.2.2	....	each	\$85	1	\$85	
100	Women's Restroom	Ambulatory Stall - Coat Hook	478-479	The coat hook is 49-1/2 inches AFF.	Relocate or add a second coat hook no higher than 48 inches high adjacent to an unobstructed clear floor space in the compartment (but not recommended on the face of an out swinging door).	213.3.7 603.4 604.8.3 308	4.1.3(13) 4.22.7 4.2.5 4.2.6 4.27.3	each	\$61	1	\$61	
101	Women's Restroom	Ambulatory Stall - Toilet Paper Dispenser	481-484	The toilet paper dispenser centerline is 9-3/4 inches from the front edge of the toilet. The far edge of the dispenser is more than 36 inches from the rear wall.	Relocate the toilet paper dispenser to have a dispensing outlet height of 15 inches minimum AFF to 48 inches maximum AFF, with 12 inches minimum clearance above or 1-1/2 inches minimum clearance below the sidewall grab bar and centered 7 inches minimum to 9 inches maximum in front of the water closet.	604.7 609.3	4.16.6	each	\$85	1	\$85	
102	Women's Restroom	Ambulatory Stall - Grab Bars	485-486	The grab bars are mounted 36-5/8 inches AFF to the top gripping surface.	Provide a 42-inch long minimum horizontal side wall grab bar mounted at 33 inches minimum to 36 inches maximum AFF to the top of the gripping surface, located 12 inches maximum measured from the rear wall and extending 54 inches minimum from the rear wall. Assure 12 inches minimum clearance above and 1-1/2 inches minimum clearance below the grab bar. Assure the clearance between the wall and grab bar is 1-1/2 inches.	604.8.2.3	4.22.4	each	\$294	2	\$588	

Line Item #	Location	Element	Photo	Non-Compliant Feature Description	Action	2010 Standards	1991 Standards	Unit	Unit Cost*	Qty	Estimated Cost*	Comment
103	Women's Restroom	Ambulatory Stall - Seat Protector Dispenser	460	The seat protector dispenser is located at the rear wall of the ambulatory stall, above the water closet.	Relocate the accessory/dispenser to 48 inches high maximum to the highest operable part in a position where it abuts a 30 inch by 48 inch clear floor space and it at least 12 inches above or 1-1/2 inches below any grab bar.	305 308	4.2.4 4.2.5 4.2.6 4.22.7 4.27.2	each	\$127	1	\$127	
104	Men's Restroom	Signage	45-46	The restroom signage does not have raised characters or braille.	Provide signage that is high contrast, non-glare, sans serif, tactile (raised characters and braille) stock signage on the wall at the strike side of the door (right side of double doors). Mount sign so that tactile characters are located 48 inches minimum measured from the baseline of the lowest tactile character and 60 inches maximum from the baseline of the highest tactile character. Locate the sign 9 inches minimum from the edge of the door to the centerline of the tactile characters. Maintain a clear floor space 18 inches by 18 inches minimum, centered on the tactile characters and beyond the swing of any door.	216.2 703.1 703.2 703.5 703.6	4.1.3(16)(a) 4.30.1 4.30.4 4.30.5 4.30.6	each (wall mount)	\$100	1	\$100	
105	Men's Restroom	Door - Clear Width	48-49	The door clear open width is 31 inches.	Widen door to provide a 32 inches wide minimum net clear opening.	404.2.3	4.13.4 4.13.5	interior door (metal)	\$3,011	1	\$3,011	
106	Men's Restroom	Door - Opening Force & Closing Speed	52	The door has an opening force of 9 pounds and a closing speed of 3 seconds.	Adjust door closer to provide a maximum 5 pounds of force and 5 seconds minimum closing speed from an open position of 90 degrees to a position 12 degrees from the latch.	404.2.8.1 404.2.9	4.13.10 4.13.11	Operations	\$0	1	\$0	
107	Men's Restroom	Door - Threshold	50-51	The door threshold is 1 inch overall, with an abrupt portion 1/2 inch high at the exterior (corridor) side of the threshold.	Replace or modify the threshold to have a maximum abrupt vertical level change of 1/4 inch with a maximum overall rise of 1/2 inch sloped 1:2 maximum.	404.2.5	4.13.8	door	\$221	1	\$221	
108	Men's Restroom	Light Switch - Height	52, 55	The top of the light switch is 55 inches AFF.	Lower the light switch to 48 inches high maximum to the highest operable part.	308	4.2.5 4.2.6	each	\$319	1	\$319	
109	Men's Restroom	Dryer - Protruding Object	59-61	The hand dryer projects 7 inches at 41-1/2 inches AFF.	Relocate hand dryer to a position where it is not a protruding object.	307.2	4.4.1	Operations	\$0	1	\$0	
110					OR: Replace hand dryer with unit that projects 4 inches maximum from the wall surface.	307.2	4.4.1	each	\$127	1	\$127	
111	Men's Restroom	Baby Changing Station	65-69	The grip at the upper corner of the baby changing station is 50 inches AFF. The rim of the open changing surface is 35 inches AFF.	Provide baby changing station with pull down handle no higher than 48 inches and a surface/lip height at or below 34 inches with at least 27 inches high knee clearance when open.	305 308	4.2.4 4.2.5 4.2.6 4.22.7 4.27.2	unit	\$591	1	\$591	
112	Men's Restroom	Mirror - Height	70-72	The mirrors over each of the lavatories are located 40-1/2 inches to 40-3/4 inches AFF.	Lower mirror to 40 inches high maximum to bottom reflecting edge.	213.3.5 603.3	4.19.6 4.22.6	each	\$127	1	\$127	
113					OR: Provide a full length mirror with a bottom edge that is 35 inches maximum AFF.	213.3.5 603.3	....	each	\$282	1	\$282	
114	Men's Restroom	Lavatory - Pipes	73	The lavatory pipes are not covered.	Insulate the supply and drainage pipes under the lavatory.	213.3.4 606.5	4.19.4 4.22.6	each sink	\$83	1	\$83	

Line Item #	Location	Element	Photo	Non-Compliant Feature Description	Action	2010 Standards	1991 Standards	Unit	Unit Cost*	Qty	Estimated Cost*	Comment
115	Men's Restroom	Accessible Stall - None Provided	74-76	There is no wheelchair accessible stall provided in the restroom. There is an ambulatory type stall provided. See findings for ambulatory stall below. Note that an ambulatory stall is not an acceptable alternative to a wheelchair accessible toilet stall, and that an ambulatory stall is not required based on the current fixture count.	Provide an accessible men's restroom with a wheelchair accessible toilet stall.	213.2	4.1.3(11)	undetermined				The existing women's toilet room dimensions appear unlikely to accommodate a wheelchair accessible stall without elimination of the second toilet fixture, essentially creating a single user restroom. It may be possible to create accessible men's and women's multi-user toilet rooms by switching the men's and women's toilet room locations (the existing men's toilet room is larger).
116	Men's Restroom	Ambulatory Stall - Door Maneuvering Clearance	77-79	The pull side maneuvering clearance at the ambulatory stall door is 38-1/2 inches deep to the coved floor base.	Modify compartment to provide 42 inches deep minimum clearance between the door and the wall.	608.2.2	...	each	\$1,665	1	\$1,665	
117	Men's Restroom	Ambulatory Stall - Water Closet Centerline	80-81	The water closet centerline is 15-3/4 inches from the side wall.	In the ambulatory stall, relocate the water closet to be centered 17 inches to 19 inches from the side wall.	604.2	4.17.3 Fig. 30(b)	each wall hung	\$2,556	1	\$2,556	
118	Men's Restroom	Ambulatory Stall - Hardware	90	Pull hardware is provided at the pull (exterior) side of the stall door only.	Install pull handles on both sides of the ambulatory toilet compartment door.	604.8.2.2	....	each	\$85	1	\$85	
119	Men's Restroom	Ambulatory Stall - Toilet Paper Dispenser	83-85	The toilet paper dispenser centerline is 9-1/2 inches from the front edge of the toilet. The far edge of the dispenser is more than 36 inches from the rear wall.	Relocate the toilet paper dispenser to have a dispensing outlet height of 15 inches minimum AFF to 48 inches maximum AFF, with 12 inches minimum clearance above or 1-1/2 inches minimum clearance below the sidewall grab bar and centered 7 inches minimum to 9 inches maximum in front of the water closet.	604.7 609.3	4.16.6	each	\$85	1	\$85	
120	Men's Restroom	Ambulatory Stall - Grab Bars	74, 87-88	The grab bars are mounted 36-5/8 inches AFF to the top gripping surface.	Provide a 42-inch long minimum horizontal side wall grab bar mounted at 33 inches minimum to 36 inches maximum AFF to the top of the gripping surface, located 12 inches maximum measured from the rear wall and extending 54 inches minimum from the rear wall. Assure 12 inches minimum clearance above and 1-1/2 inches minimum clearance below the grab bar. Assure the clearance between the wall and grab bar is 1-1/2 inches.	604.8.2.3	4.22.4	each	\$294	2	\$588	
121	Men's Restroom	Ambulatory Stall - Seat Protector Dispenser	86	The seat protector dispenser is located at the rear wall of the ambulatory stall, above the water closet.	Relocate the accessory/dispenser to 48 inches high maximum to the highest operable part in a position where it abuts a 30 inch by 48 inch clear floor space and it at least 12 inches above or 1-1/2 inches below any grab bar.	305 308	4.2.4 4.2.5 4.2.6 4.22.7 4.27.2	each	\$127	1	\$127	
122	Employee Restroom											
123	Employee Restroom	Turning Space	252, 258, 261	Turning space is not provided in the restroom due to the location of the metal compartment partition. The restroom is 60-3/4 inches wide overall, and 70-1/4 inches deep, to the build-out in the corner of the room.	Modify walls to provide an unobstructed 60 inches minimum diameter turning circle or T-shaped turning space.	304 603.2.1	4.2.3 4.22.3	undetermined				
124	Employee Restroom	Door - Hardware	247, 268	The door has knob hardware.	Change door knobs to lever handles.	404.2.7	4.13.9	each	\$312	1	\$312	

Line Item #	Location	Element	Photo	Non-Compliant Feature Description	Action	2010 Standards	1991 Standards	Unit	Unit Cost*	Qty	Estimated Cost*	Comment
125	Employee Restroom	Door - Clear Width	249	The door has a clear opening width of 24 inches.	Widen door to provide a 32 inches wide minimum net clear opening.	404.2.3	4.13.4 4.13.5	interior door (metal)	\$3,011	1	\$3,011	
126	Employee Restroom	Door - Threshold	249	The door threshold is 1-1/4 inches high overall with an abrupt portion 1/2 inch high.	Replace or modify the threshold to have a maximum abrupt vertical level change of 1/4 inch with a maximum overall rise of 1/2 inch sloped 1:2 maximum.	404.2.5	4.13.8	door	\$221	1	\$221	
127	Employee Restroom	Door - Maneuvering Clearance	249-253 258	The pull side maneuvering clearance is 12 inches wide at the latch side, and 43 inches deep to the metal partition. There is a heater located within the maneuvering clearance.	Modify the doorway and/or adjacent partitions to provide pull side maneuvering clearance for a forward approach to a door, which is 18 inches wide minimum past the latch and 60 inches deep minimum.	404.2.4	4.13.6	door (mtl/wood)	\$4,811	1	\$4,811	
128					OR: Install an automated power operator with push button control. The clear floor space adjacent to the control (centered on the control recommended) must be located beyond the arc of the door swing. Assure automatic and power-assisted doors and gates comply with provisions found in ANSI/BHMA A156.10 [[ANSI/BHMA A156.19 for low-energy doors]]. Use of an automatic door operator eliminates the requirement for maneuvering clearance space at both sides of the door, provided that the door has standby power, or that it remains open in the power-off condition.	404.3	4.13.12	exterior door (entrance door)	\$13,108	1	\$13,108	
129	Employee Restroom	Door - Opening Force & Closing Speed	247	The door has an opening force of 10 pounds and a closing speed of 2 seconds.	Adjust door closer to provide a maximum 5 pounds of force and 5 seconds minimum closing speed from an open position of 90 degrees to a position 12 degrees from the latch.	404.2.8.1 404.2.9	4.13.10 4.13.11	Operations	\$0	1	\$0	
130	Employee Restroom	Lavatory - Knee & Toe Clearance	254	The lavatory has 24-1/2 inches high knee clearance.	Modify the lavatory to provide 34 inches high maximum top height with 30 inches wide by 27 inches high by 8 inches deep knee clearance and 9 inches high by 30 inches wide by 17 inches deep toe clearance to allow frontal approach.	213.3.4 305.4 306 606.2	4.22.6 4.19.2 Fig. 31 Fig. 32	each	\$1,947	1	\$1,947	
131	Employee Restroom	Lavatory - Faucets	259	The lavatory has knob faucet hardware.	Replace the faucet handles with automatic or lever hardware.	213.3.4 606.4	4.19.5 4.22.6	each	\$113	1	\$113	
132	Employee Restroom	Mirror	260	The mirror above the lavatory is located more than 40 inches AFF to the bottom reflective edge.	Lower mirror to 40 inches high maximum to bottom reflecting edge.	213.3.5 603.3	4.19.6 4.22.6	each	\$127	1	\$127	
133					OR: Provide a full length mirror with a bottom edge that is 35 inches maximum AFF.	213.3.5 603.3	.....	each	\$282	1	\$282	
134	Employee Restroom	Light Switch - Height	255-256	The light switch is located 49-1/2 inches AFF.	Lower the light switch to 48 inches high maximum to the highest operable part.	308	4.2.5 4.2.6	each	\$319	1	\$319	
135	Employee Restroom	Hook - Height	257	The coat hook on the door is located 70 inches AFF.	Relocate or add a second coat hook no higher than 48 inches high adjacent to an unobstructed clear floor space in the compartment (but not recommended on the face of an out swinging door).	213.3.7 603.4 604.8.3 308	4.1.3(13) 4.22.7 4.2.5 4.2.6 4.27.3	each	\$61	1	\$61	
136	Employee Restroom	Water Closet - Seat Height	262-264	The water closet seat height is 15-3/4 inches high.	Provide water closet with a seat height of 17 inches high minimum to 19 inches high maximum.	604.4	4.16.3	each	\$2,439	1	\$2,439	
137	Employee Restroom	Water Closet - Flush Control	262, 266	The water closet flush control is not located on the open side.	Change the water closet flush operating control to be on the open side of the fixture.	604.6	4.16.5	each (flush valve)	\$1,042	1	\$1,042	

Line Item #	Location	Element	Photo	Non-Compliant Feature Description	Action	2010 Standards	1991 Standards	Unit	Unit Cost*	Qty	Estimated Cost*	Comment
138	Employee Restroom	Toilet Paper Dispenser - Location	262	The toilet paper dispenser is located on the metal partition, with the centerline 3 inches from the front edge of the toilet.	Relocate the toilet paper dispenser to have a dispensing outlet height of 15 inches minimum AFF to 48 inches maximum AFF, with 12 inches minimum clearance above or 1-1/2 inches minimum clearance below the sidewall grab bar and centered 7 inches minimum to 9 inches maximum in front of the water closet.	604.7 609.3	4.16.6	each	\$85	1	\$85	
139	Employee Restroom	Seat Protector Dispenser	267	The seat protector is located more than 48 inches AFF, inside the stall.	Relocate the accessory/dispenser to 48 inches high maximum to the highest operable part in a position where it abuts a 30 inch by 48 inch clear floor space and it at least 12 inches above or 1-1/2 inches below any grab bar.	305 308	4.2.4 4.2.5 4.2.6 4.2.2.7 4.27.2	each	\$127	1	\$127	
140	Employee Break Room											
141	Employee Break Room	Fire Extinguisher	226-227	The fire extinguisher cabinet outside the employee break room entry door has a handle at 66 inches above the finish floor surface.	Provide fire extinguisher with accessible cabinet hardware 48 inches high maximum AFF.	205 309	4.27	Operations	\$0	1	\$0	
142	Employee Break Room	Door - Maneuvering Clearance	226, 228	There is a bookcase located within the push side maneuvering clearance at the door.	Relocate furniture so that it does not obstruct the required 48 inches deep push side door maneuvering clearance.	404.2.4	4.13.6	Operations	\$0	1	\$0	
143	Employee Break Room	Door - Vision Light	228-229	The vision light at the door is 55 inches high to the bottom of the glazing.	Provide a vision light at 43 inches maximum AFF to the bottom of the glazed panel.	404.2.11	...	door	\$500	1	\$500	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.
144	Employee Break Room	Light Switch - Height	228, 230	The light switch is located 51-5/8 inches AFF.	Lower the light switch to 48 inches high maximum to the highest operable part.	308	4.2.5 4.2.6	each	\$319	1	\$319	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.
145	Employee Break Room	Sink - Knee & Toe Clearance	230-232	The sink rim is 36-3/8 inches AFF. There is no knee and toe clearance below the sink. There is a range provided in the break room kitchen.	Modify the lavatory to provide 34 inches high maximum top height with 30 inches wide by 27 inches high by 8 inches deep knee clearance and 9 inches high by 30 inches wide by 17 inches deep toe clearance to allow frontal approach.	213.3.4 305.4 306 606.2	4.22.6 4.19.2 Fig. 31 Fig. 32	each	\$1,947	1	\$1,947	
146	Employee Break Room	Switches - Height	233	Switches at the rear wall of the oven range are 46-1/2 inches AFF, and located 24 inches from the front edge of the oven.	Lower switches so that they are in reach range for a forward or side approach to the counter.	308	4.2.5 4.2.6	each	\$319	2	\$638	
147	Employee Break Room	Kitchen - Storage	234-236	The upper cabinets in the kitchen have a bottom shelf at 54-1/4 inches AFF, with pull hardware located above this height.	Modify wall and base cabinets, to have cabinet pulls and 50 percent of shelves between 15 inches minimum and 48 inches maximum AFF.	804.5	4.25.3	each	\$2,345	1	\$2,345	
148	Employee Break Room	Closet - Door Hardware	237-238	The pantry closet has knob door hardware.	Change door knobs to lever handles.	404.2.7	4.13.9	each	\$312	1	\$312	
149	Employee Break Room	Table - Knee & Toe Clearance	239	There is 26 inches high clearance at the apron at the dining table. The table has a pedestal type base.	Provide an accessible dining table that is 34 inches high maximum AFF to the top surface with 27 inches high by 17 inches deep by 30 inches wide minimum knee/toe clearance.	226	5.1	each	\$423	1	\$423	
150	Employee Break Room	Phone - Height	242-243	The phone is located 61-1/4 inches AFF to the highest control.	Lower one phone to 48 inches high maximum to top controls or buttons.	308	4.2	each	\$319	1	\$319	

Line Item #	Location	Element	Photo	Non-Compliant Feature Description	Action	2010 Standards	1991 Standards	Unit	Unit Cost*	Qty	Estimated Cost*	Comment
151	Employee Work Area	Employee Entry/Exit Door - Hardware	269-270	The door has knob hardware.	Change door knobs to lever handles.	404.2.7	4.13.9	each	\$312	1	\$312	
152	Employee Work Area	Employee Entry/Exit Door - Signage	269-270	There is no tactile signage at the emergency exit door.	Provide exit signage that is high contrast, non-glare, sans serif, tactile (raised characters and braille) stock signage on the wall at the strike side of the door (right side of double doors). Mount sign so that tactile characters are located 48 inches minimum measured from the baseline of the lowest tactile character and 60 inches maximum from the baseline of the highest tactile character. Locate the sign 9 inches minimum from the edge of the door to the centerline of the tactile characters.	703	...	each	\$116	1	\$116	Compliant with the 1991 ADA Standards; must be made compliant with the 2010 ADA Standards at the time the element is next altered.

Chevy Chase Library

8005 Connecticut Avenue, Chevy Chase, MD 20815

Connecticut Avenue

Loading/Pull-Up Area

Book Drop

Front Entrance

P2
A1
P1

Rear Entrance

Bench Seating

Dunlop Avenue

A2 P3 P4 A3 P5 P6 A4 P7

Google Earth

Montgomery County #1000
Task Order No. 17.004
Chevy Chase Library

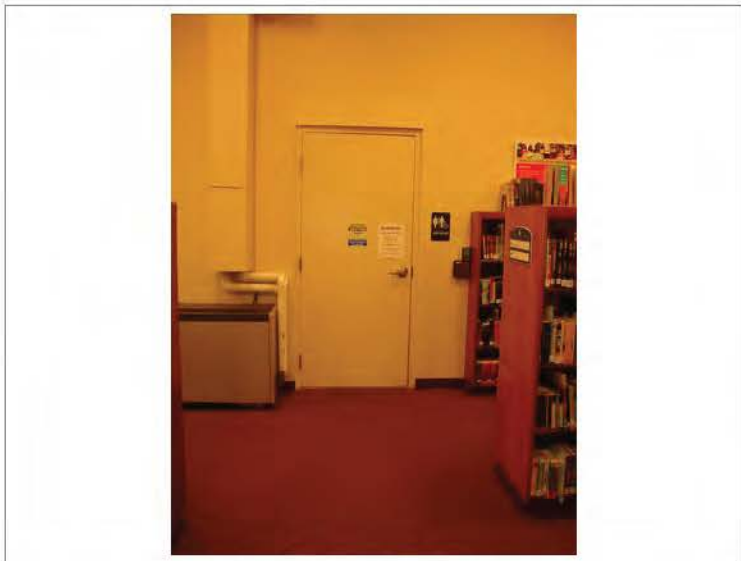
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100 ft

Chevy Chase Library



Chevy Chase Library - (1)



Chevy Chase Library - (2)



Chevy Chase Library - (3)



Chevy Chase Library - (4)



Chevy Chase Library - (5)



Chevy Chase Library - (6)

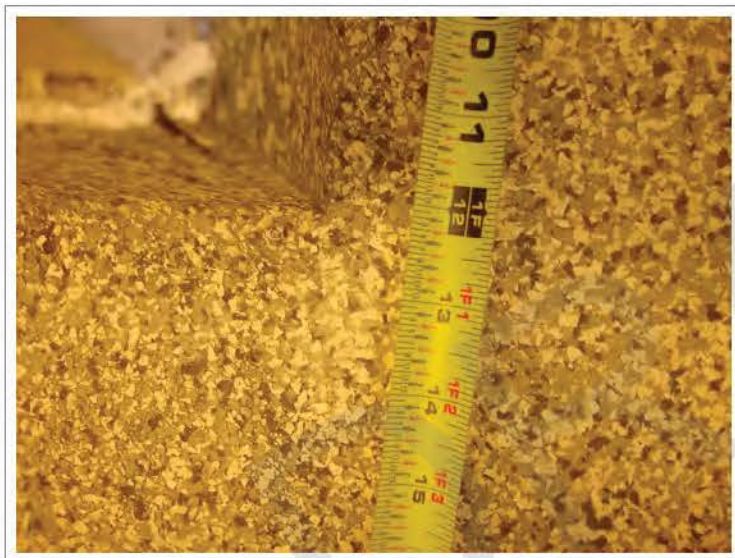
Chevy Chase Library



Chevy Chase Library - (7)



Chevy Chase Library - (8)



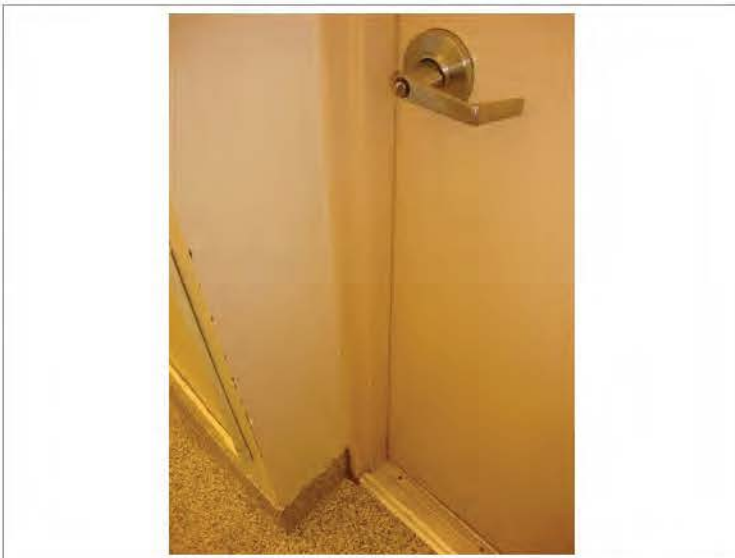
Chevy Chase Library - (9)



Chevy Chase Library - (10)



Chevy Chase Library - (11)



Chevy Chase Library - (12)

Chevy Chase Library



Chevy Chase Library - (13)



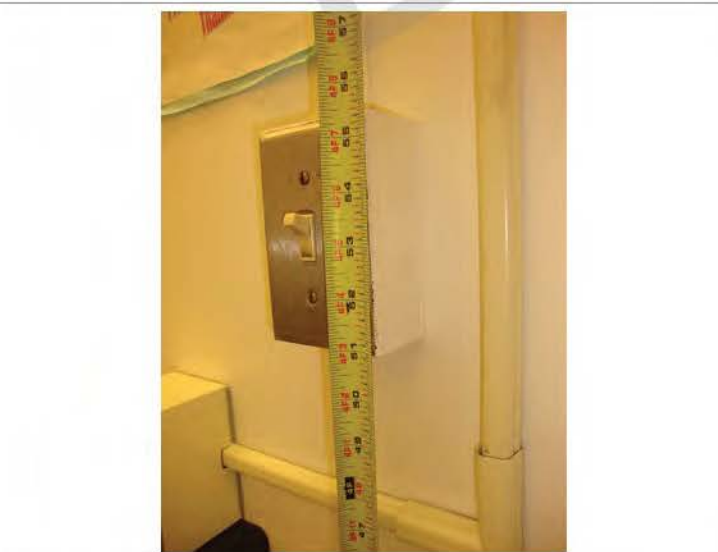
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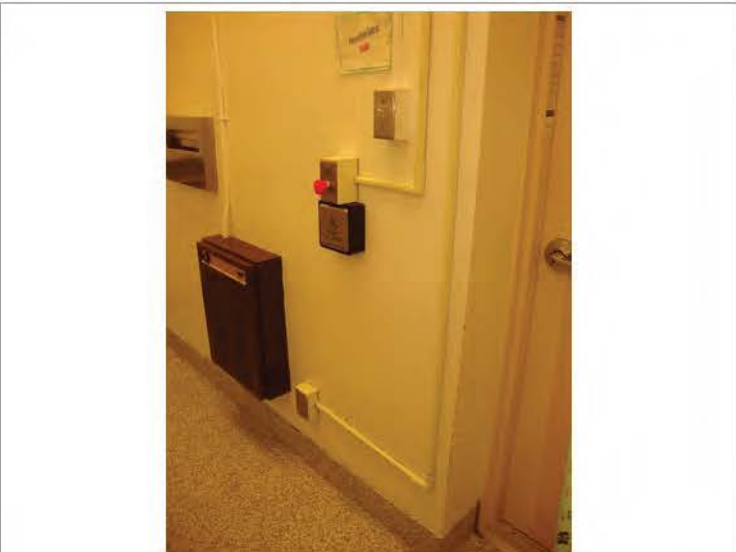
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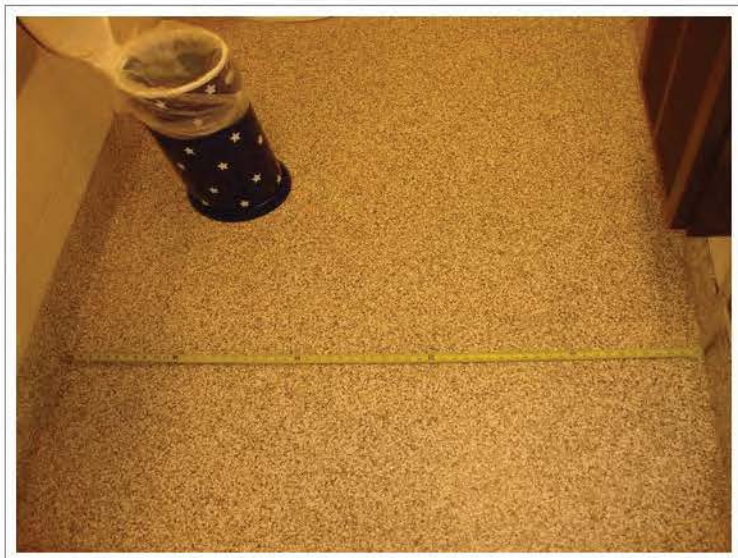


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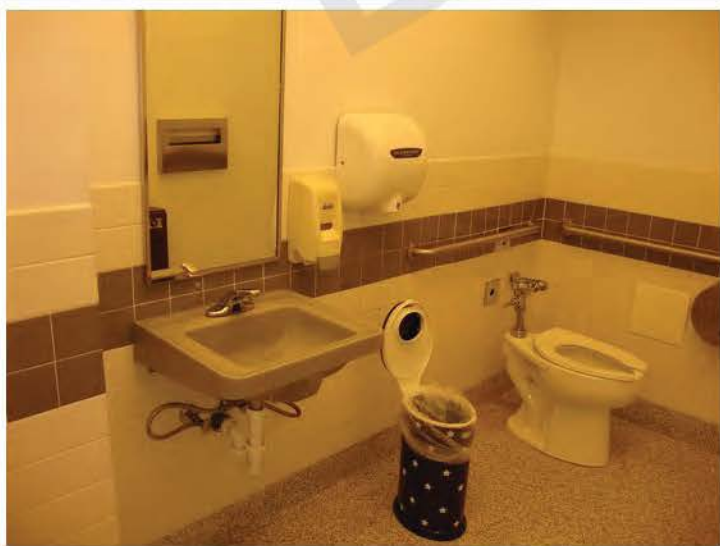
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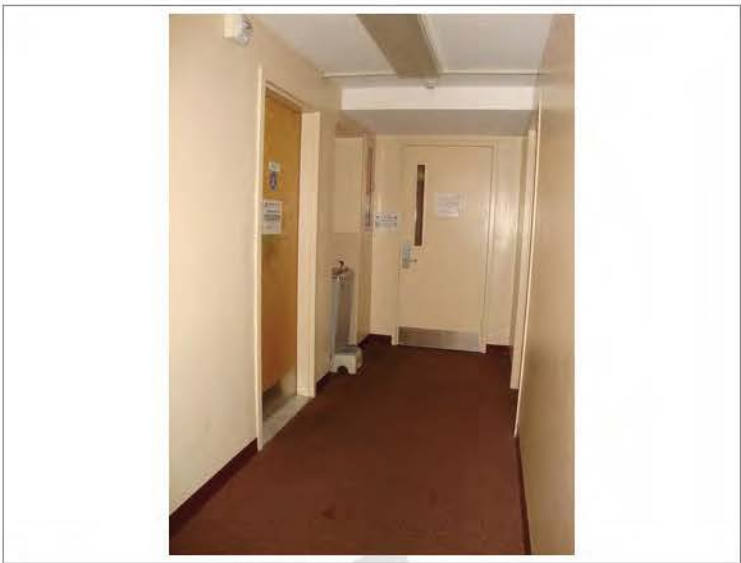


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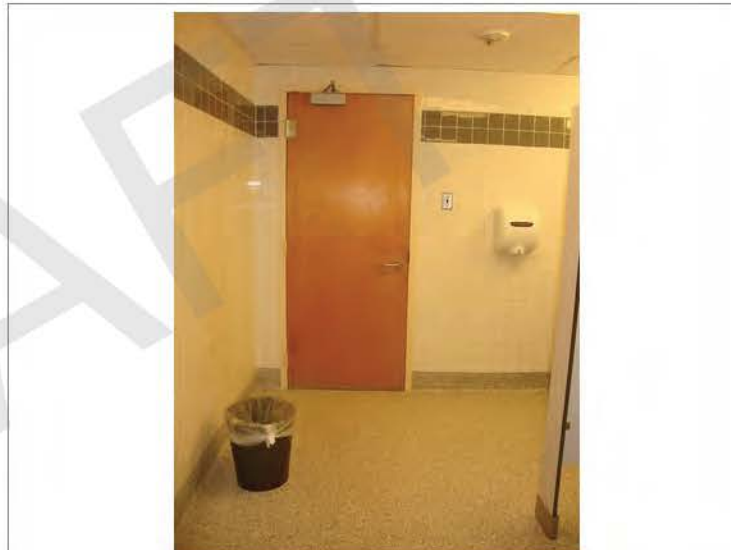
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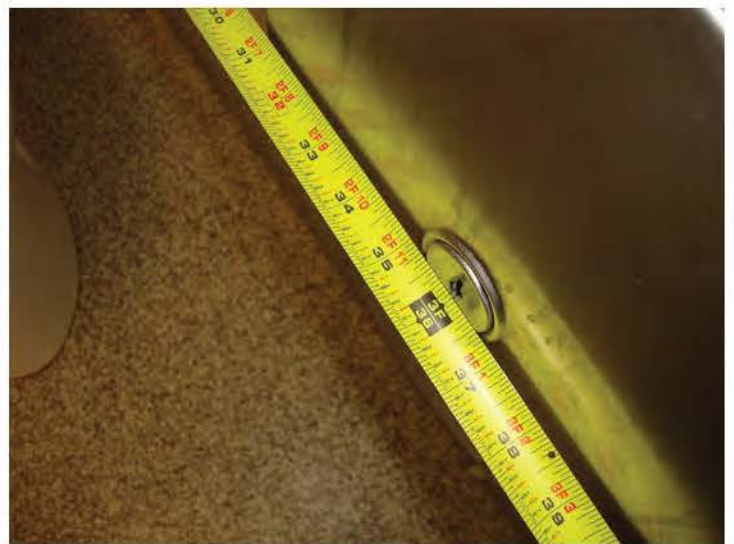
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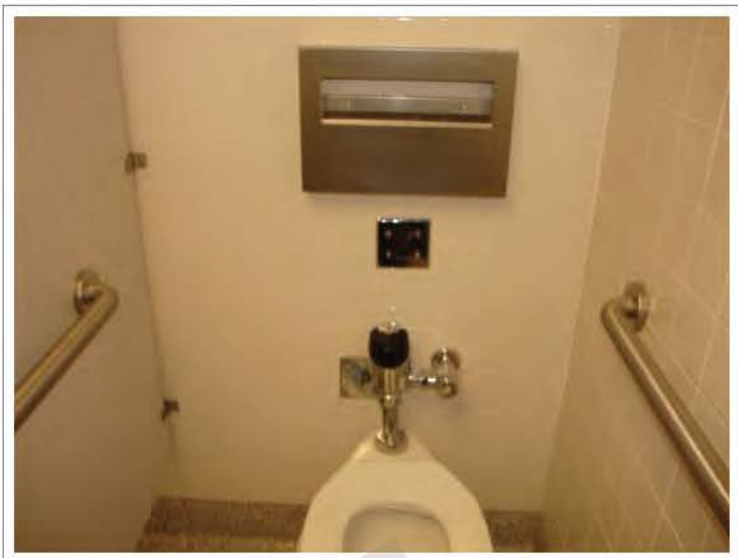


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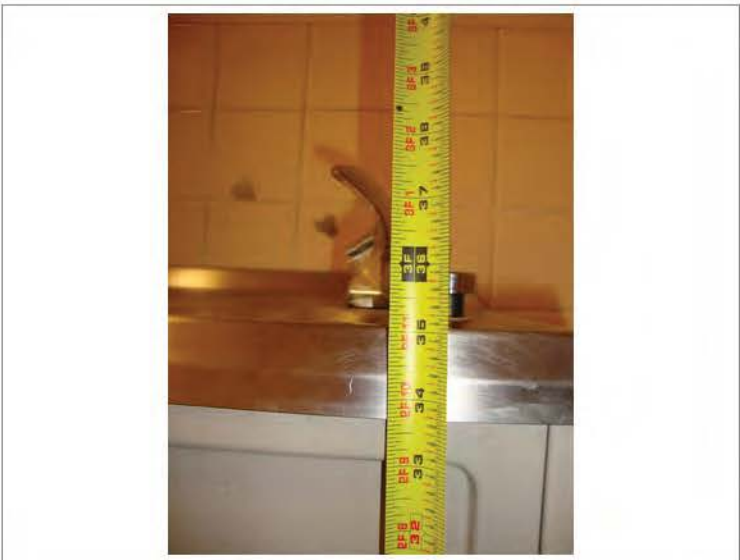
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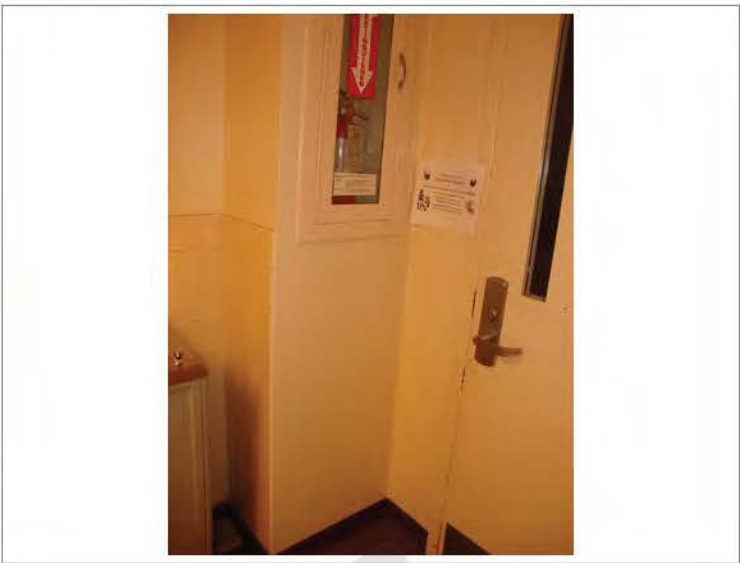


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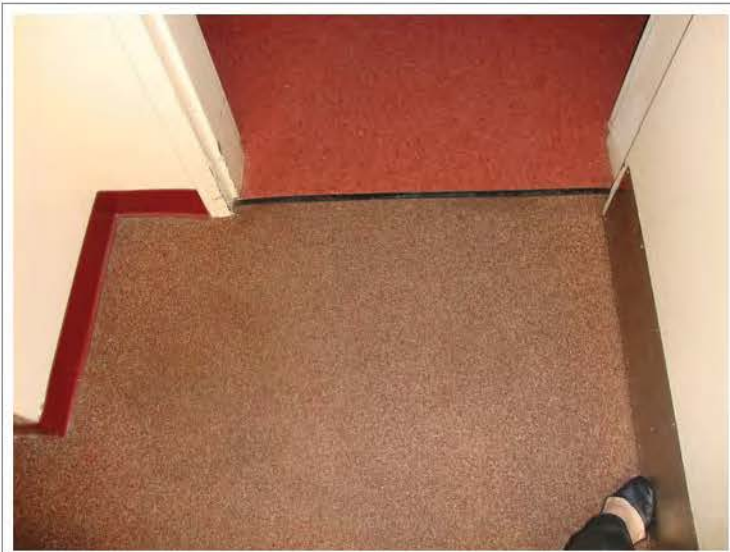


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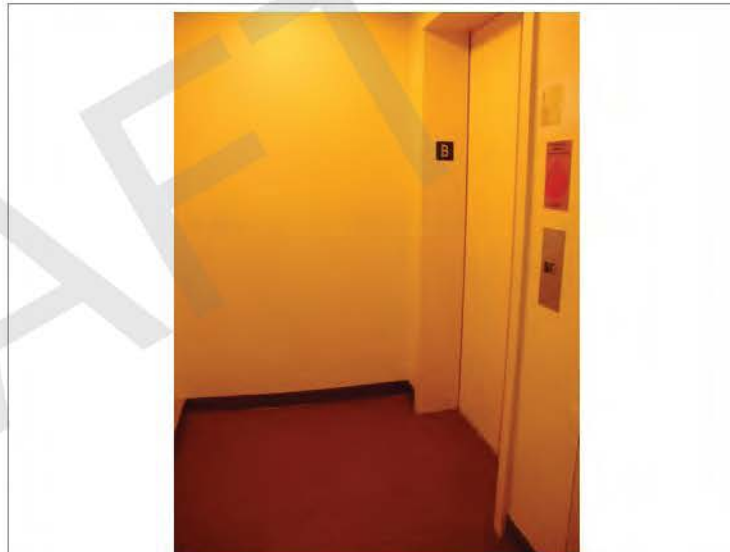
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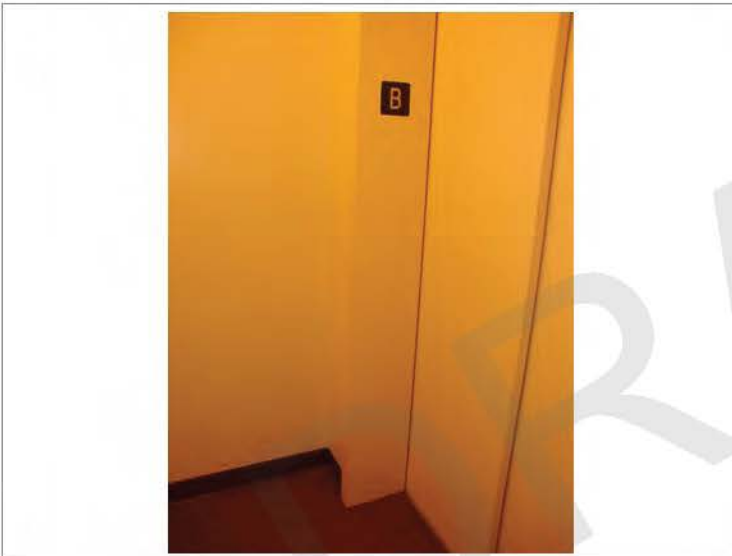
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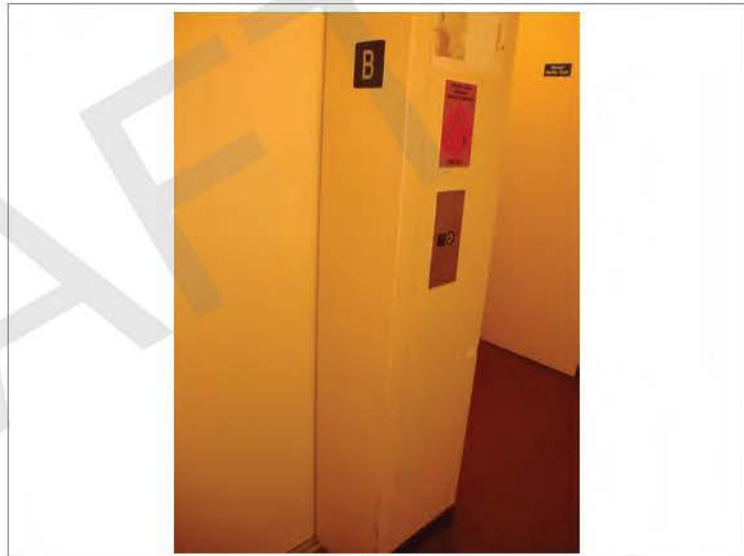
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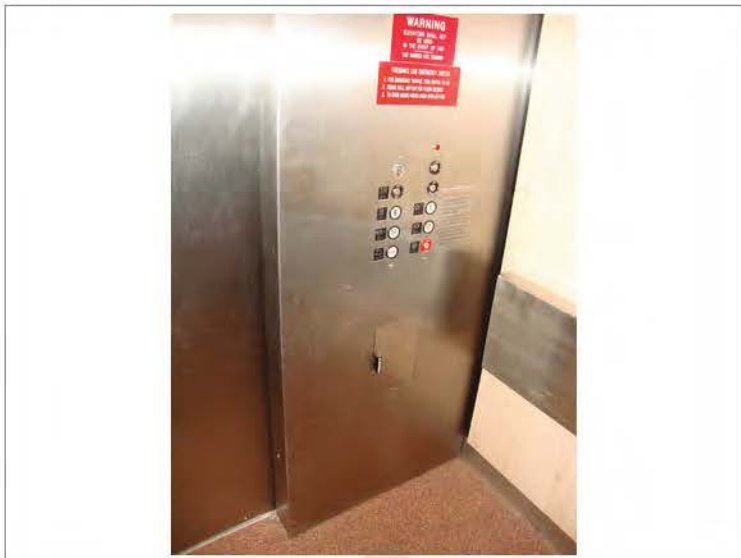


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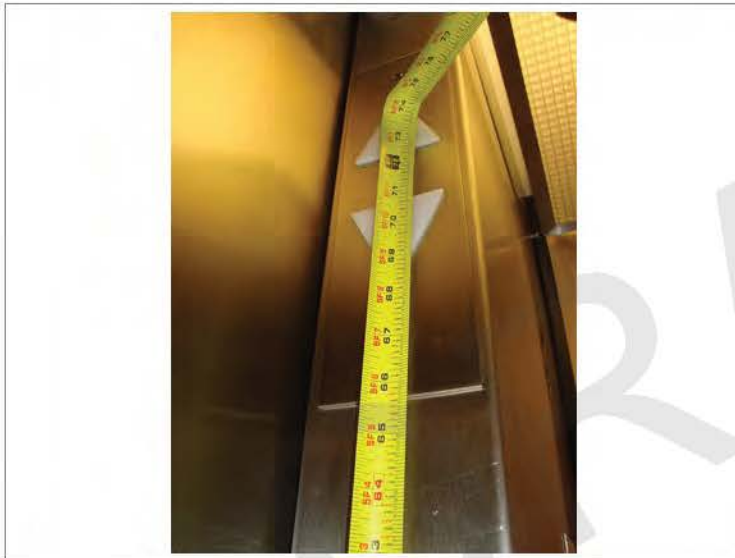
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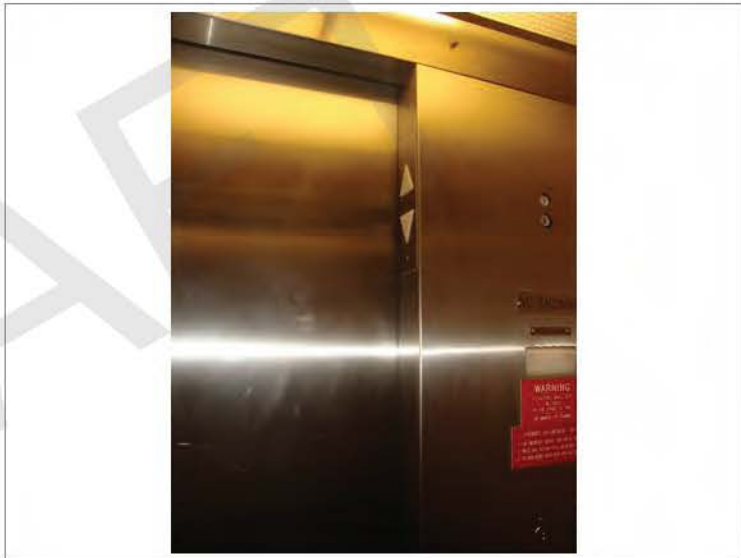
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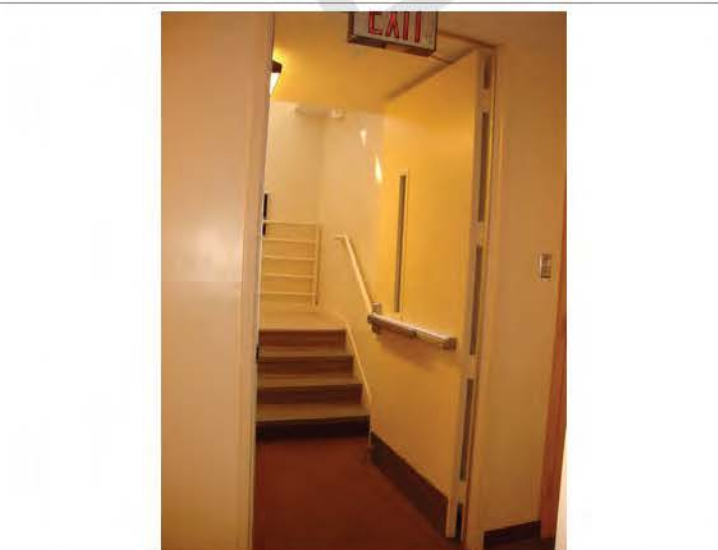
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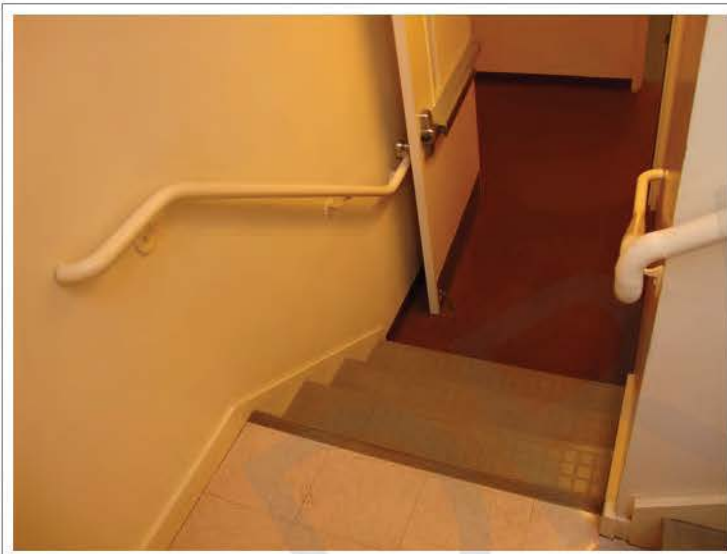
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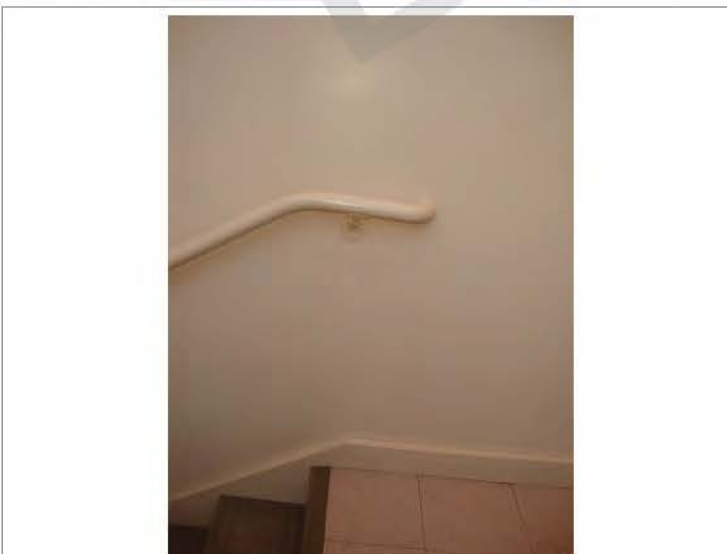
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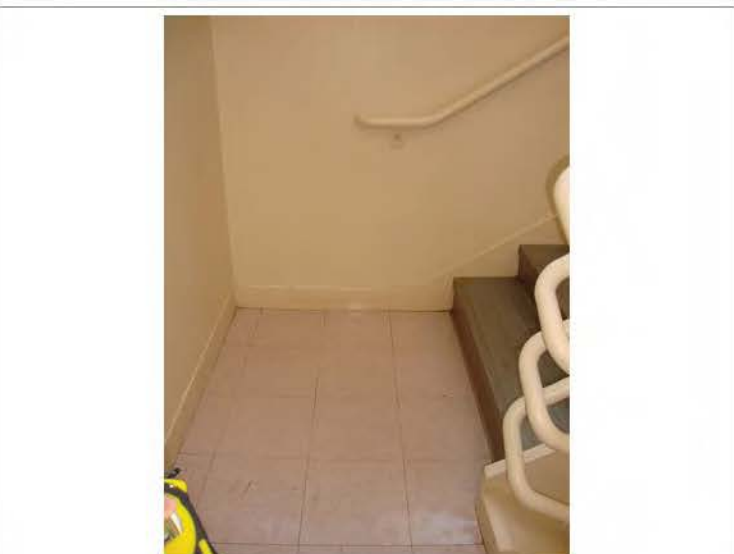
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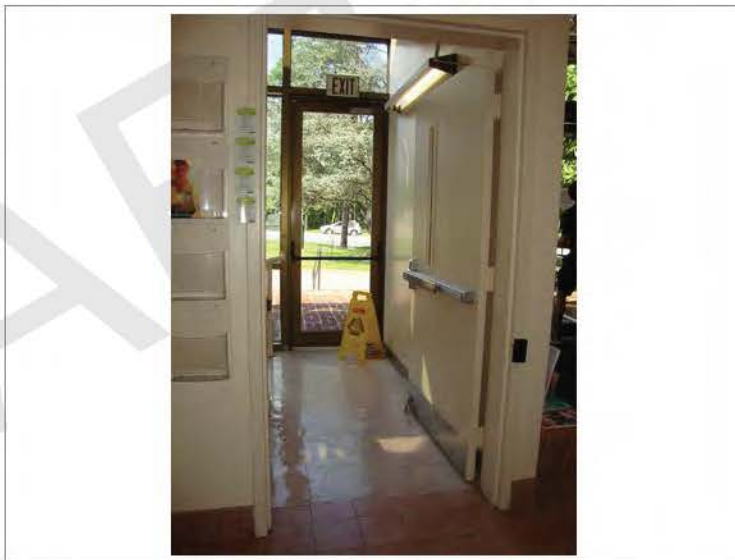
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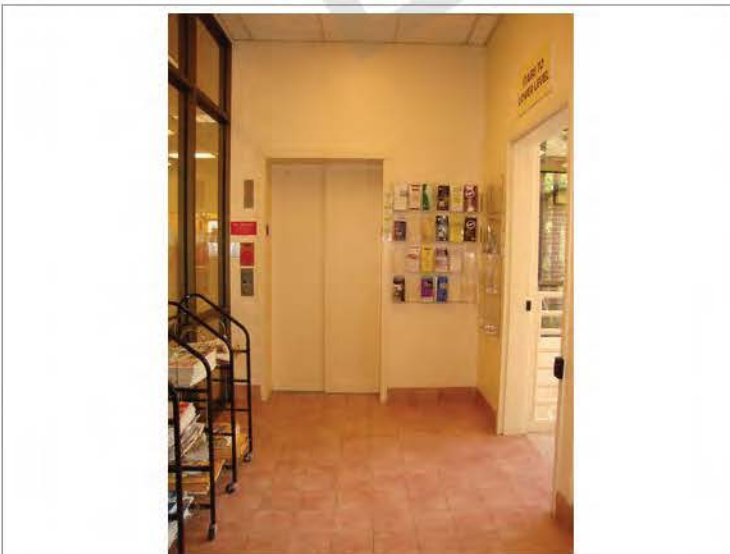
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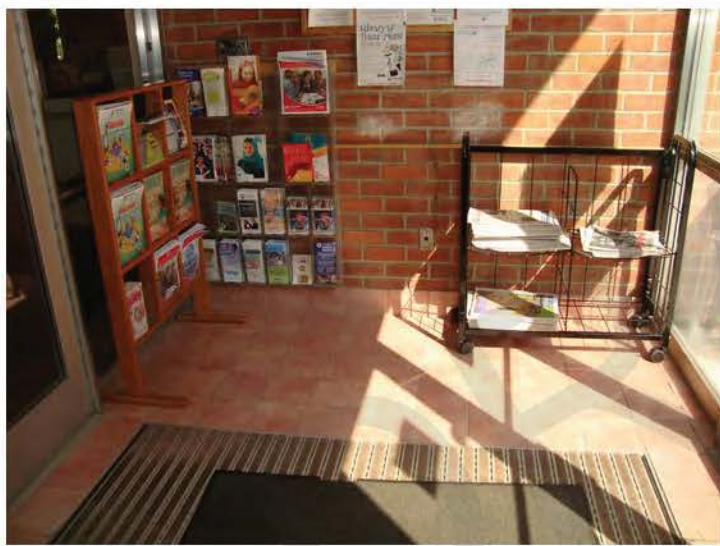
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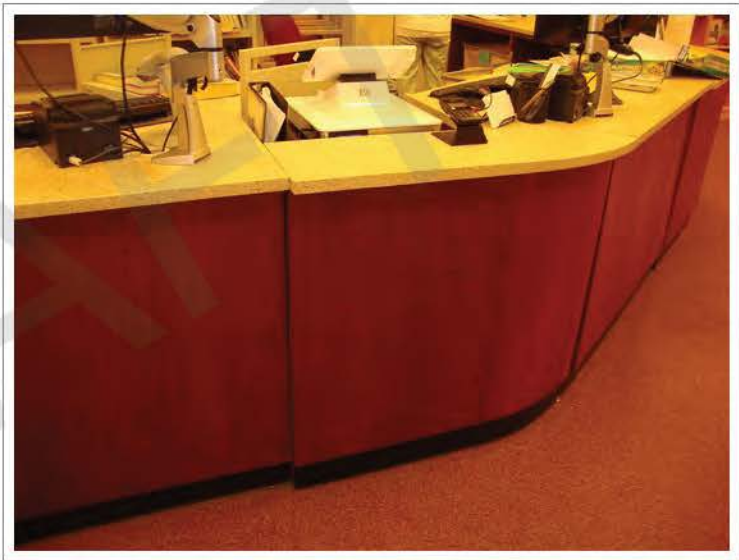
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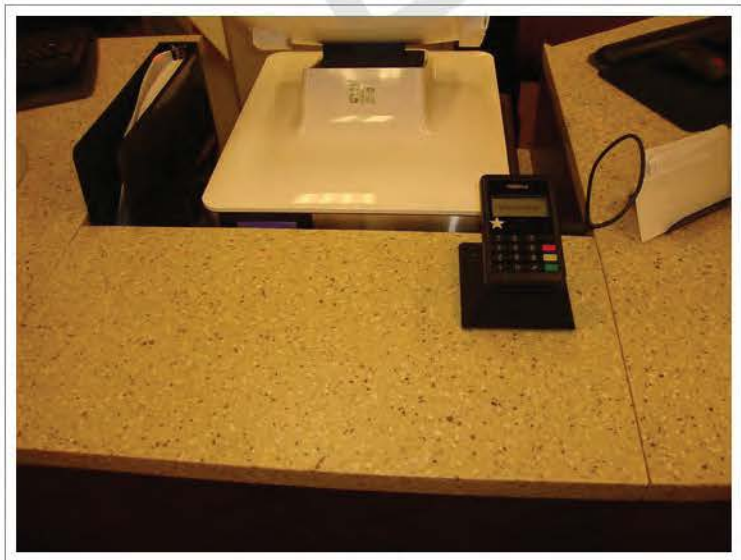
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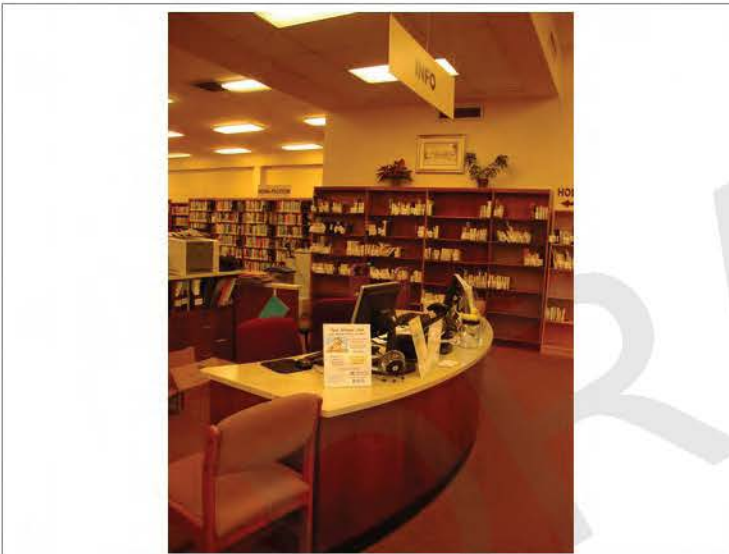
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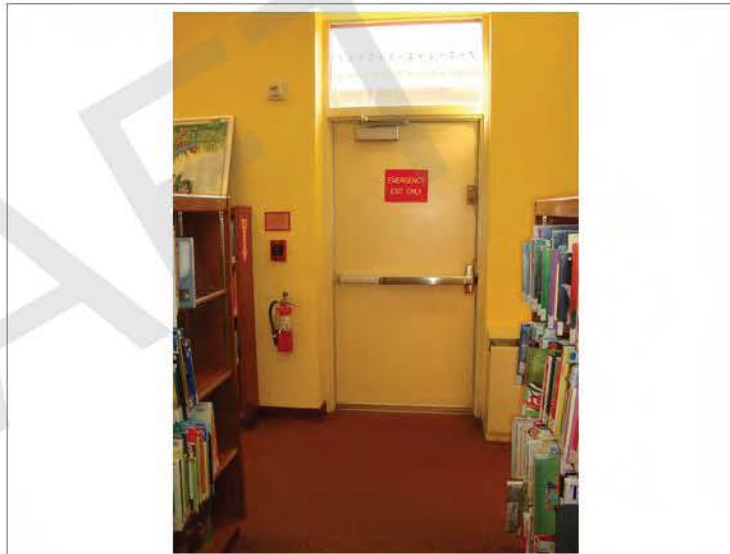
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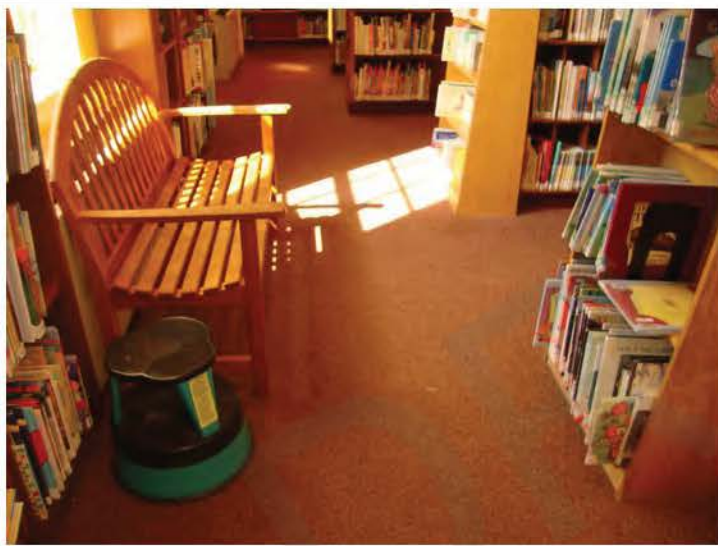
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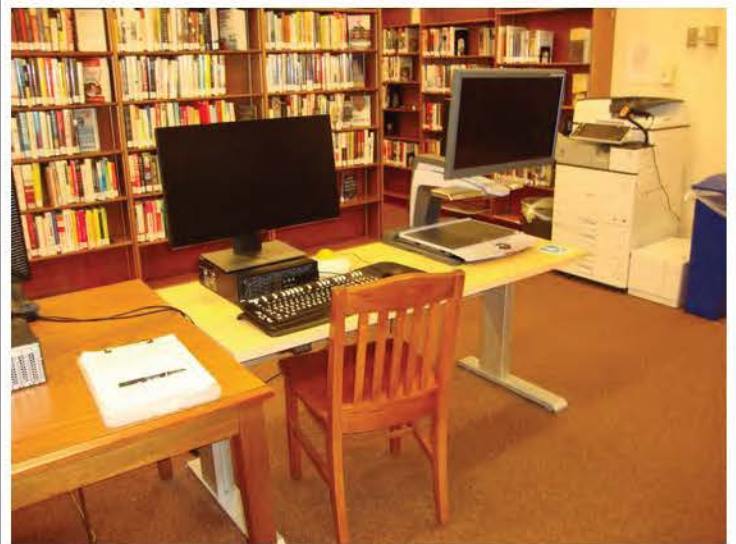
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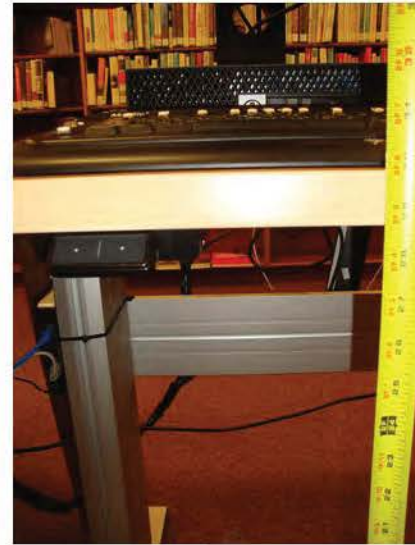


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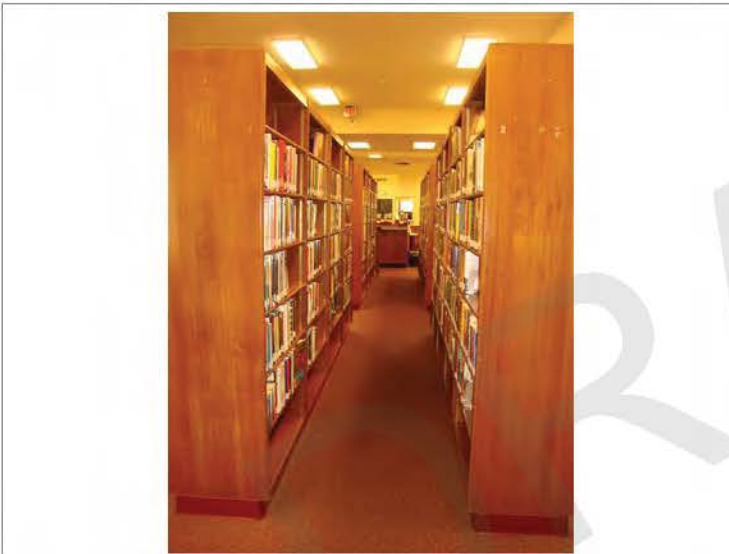
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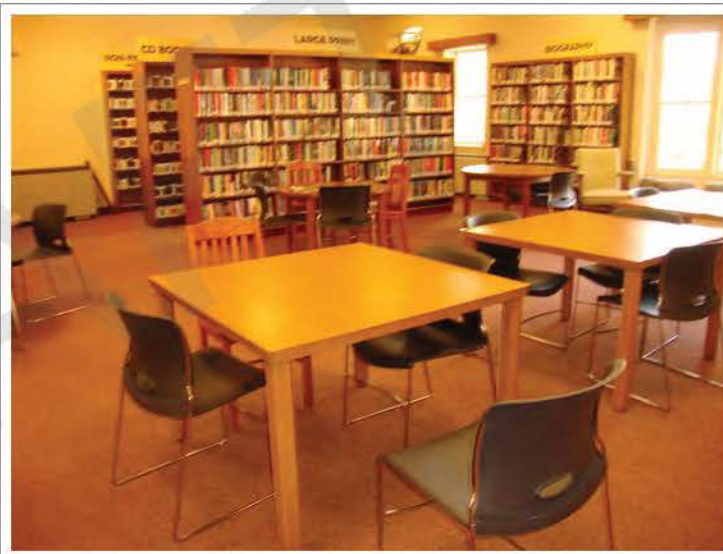
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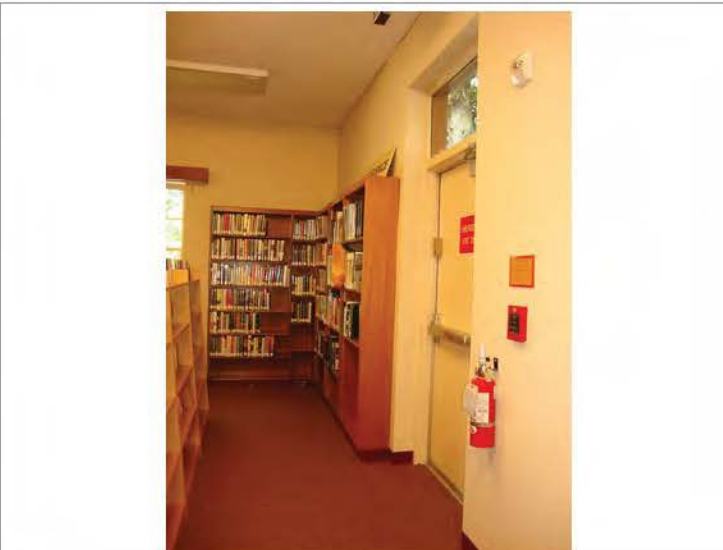
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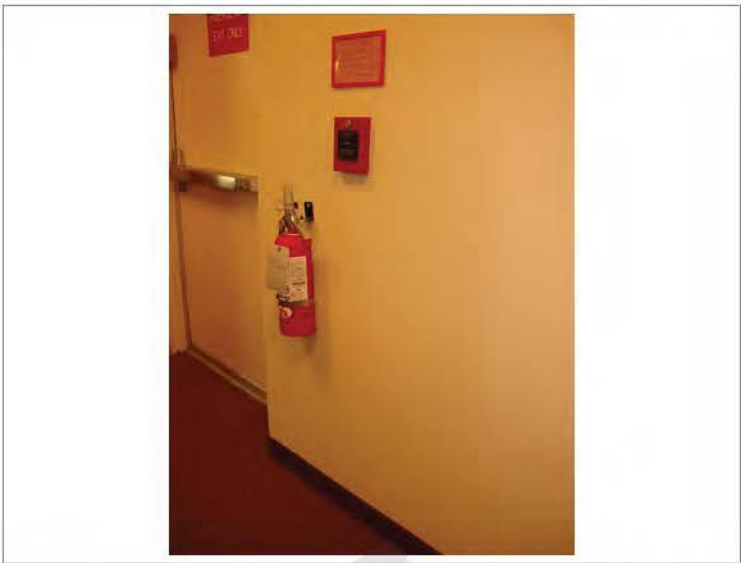


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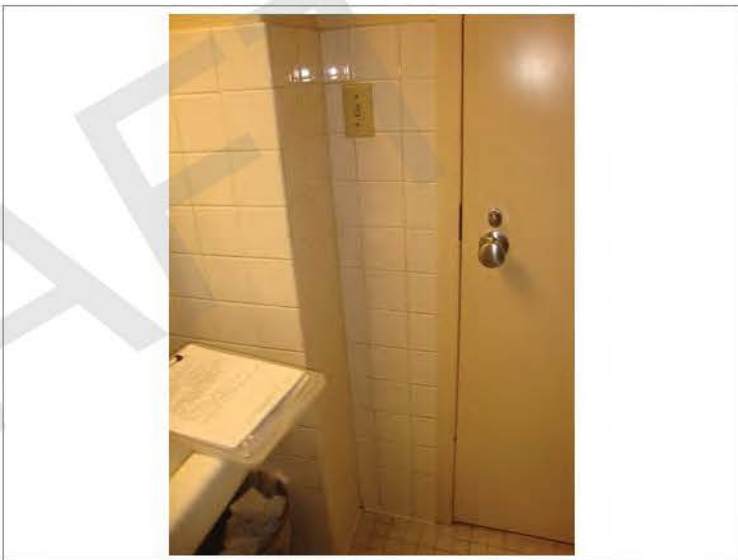
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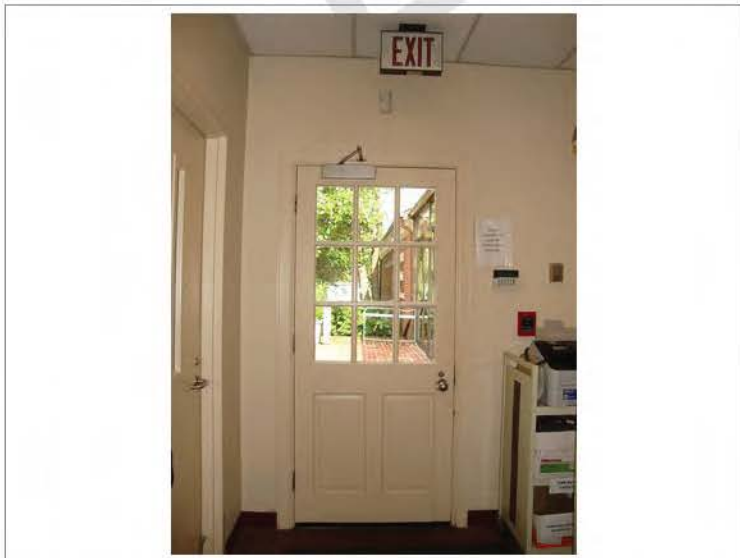
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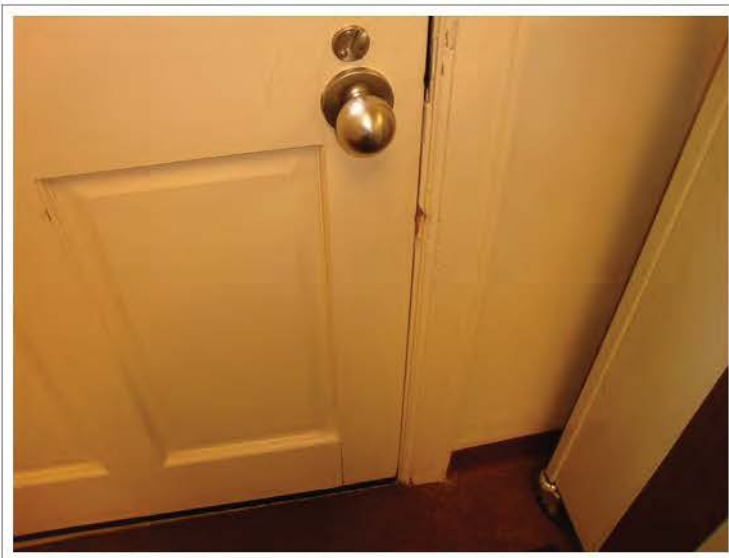
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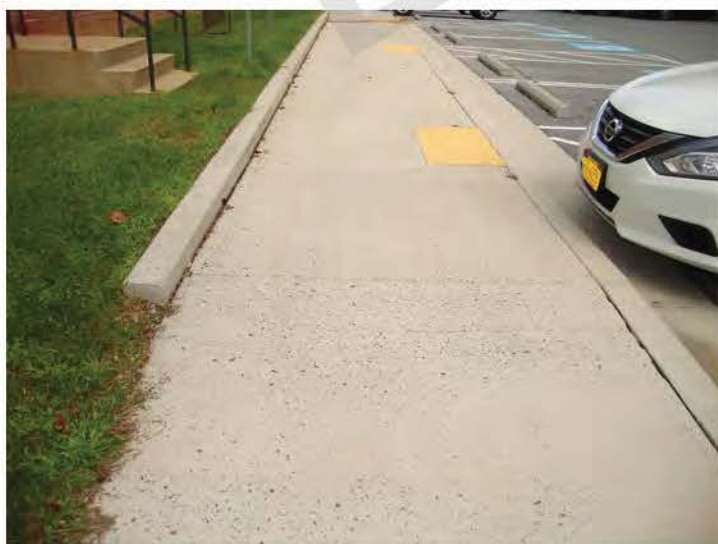
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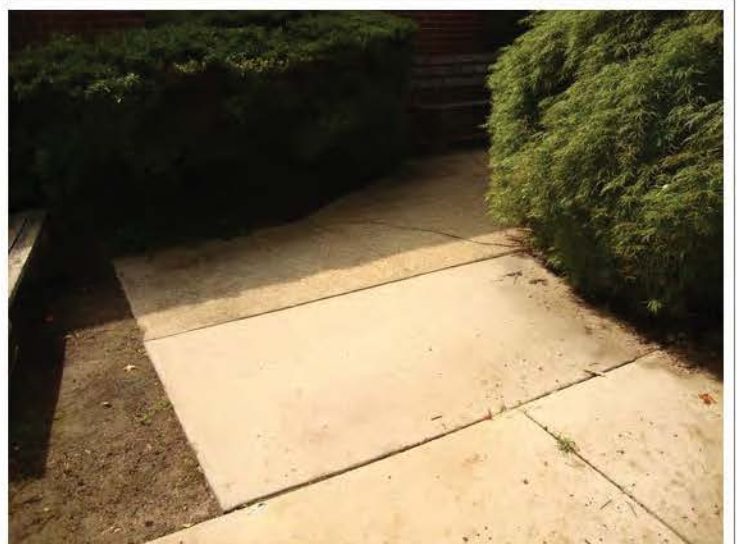
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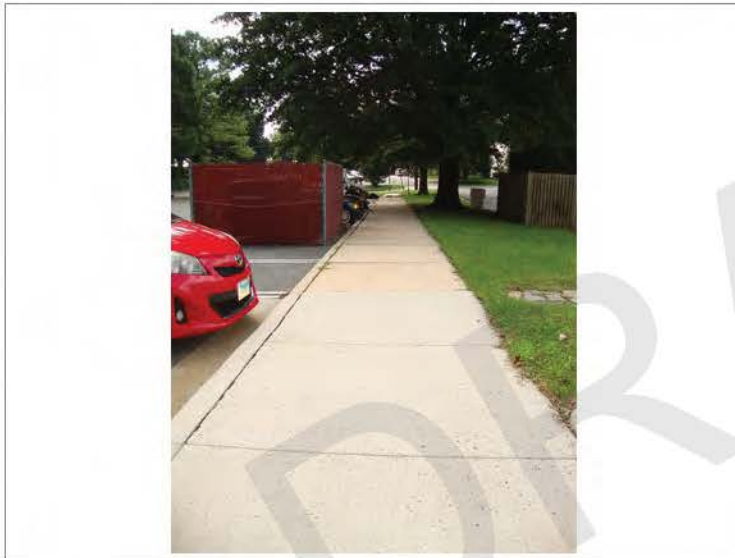
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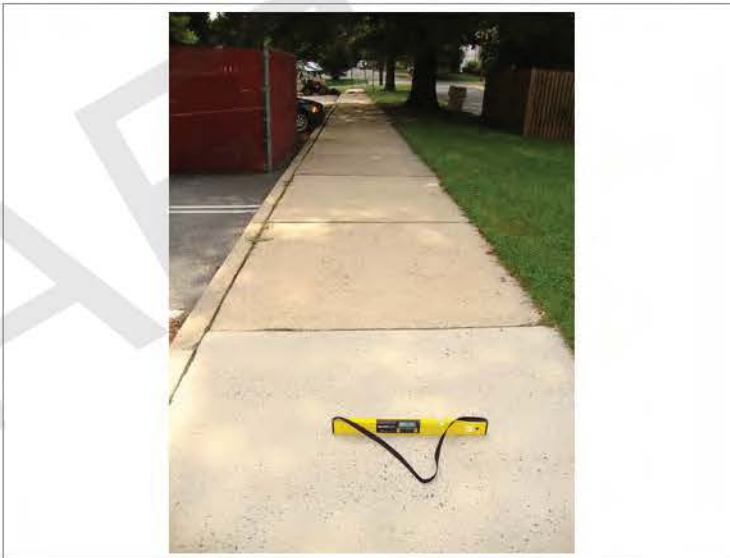
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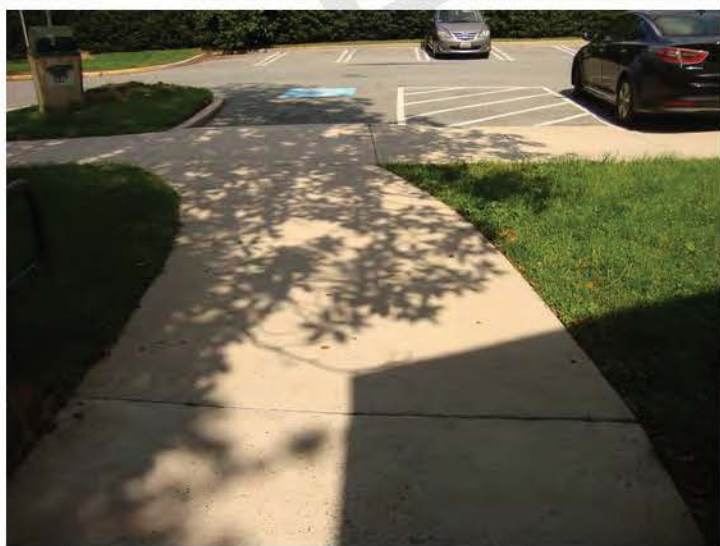
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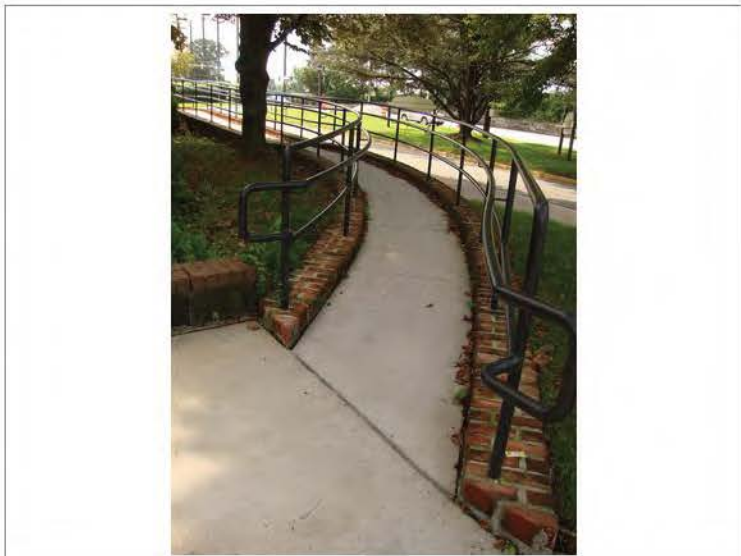


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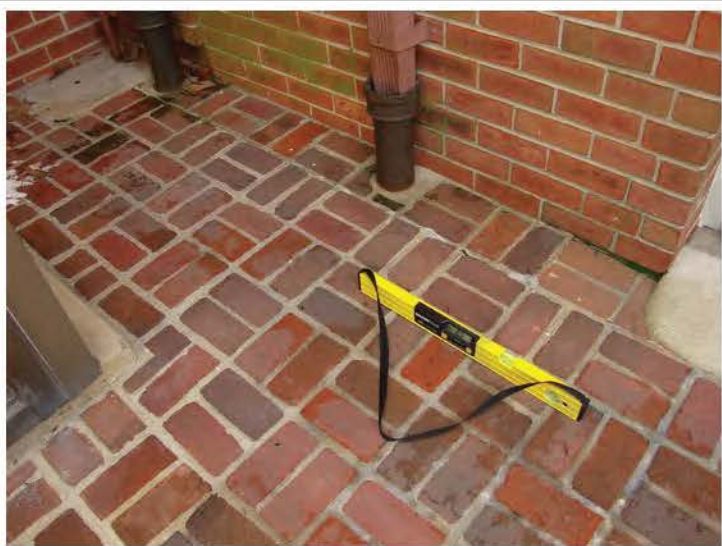
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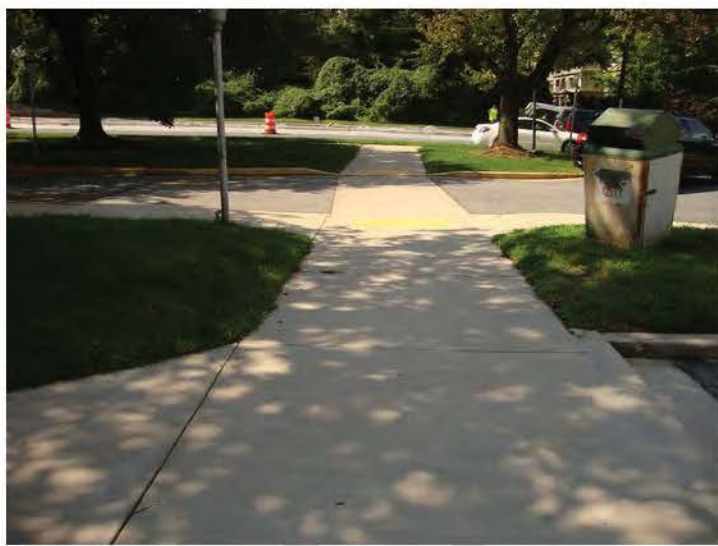
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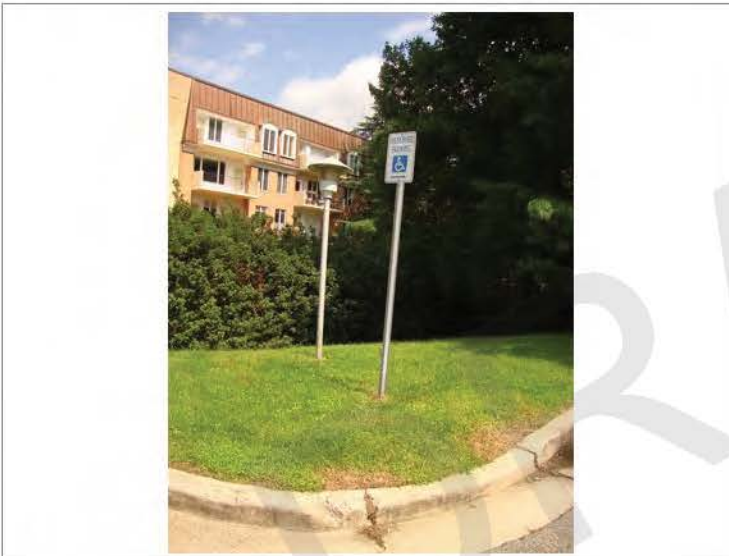
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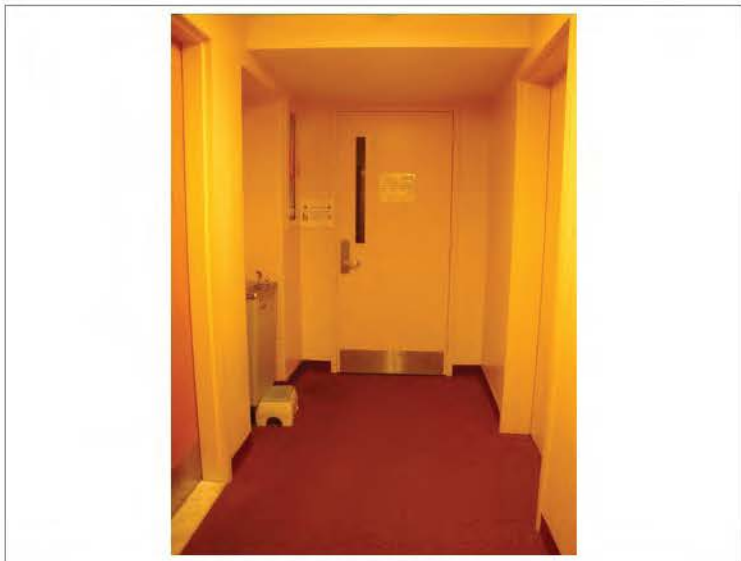


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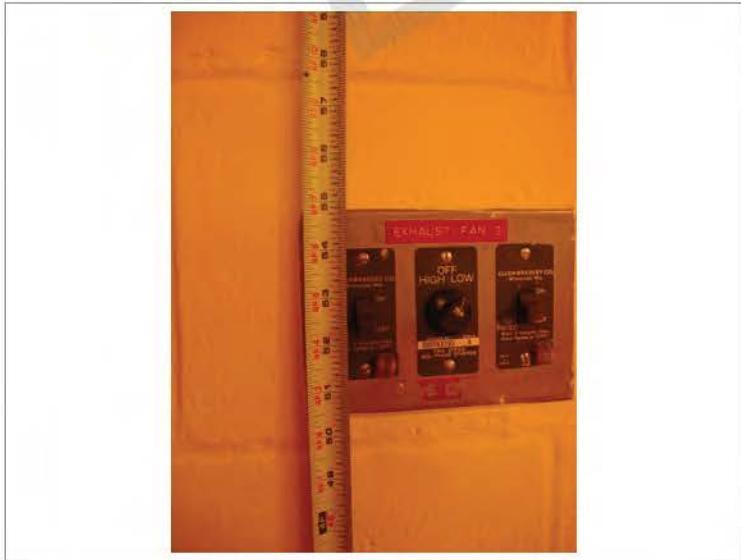
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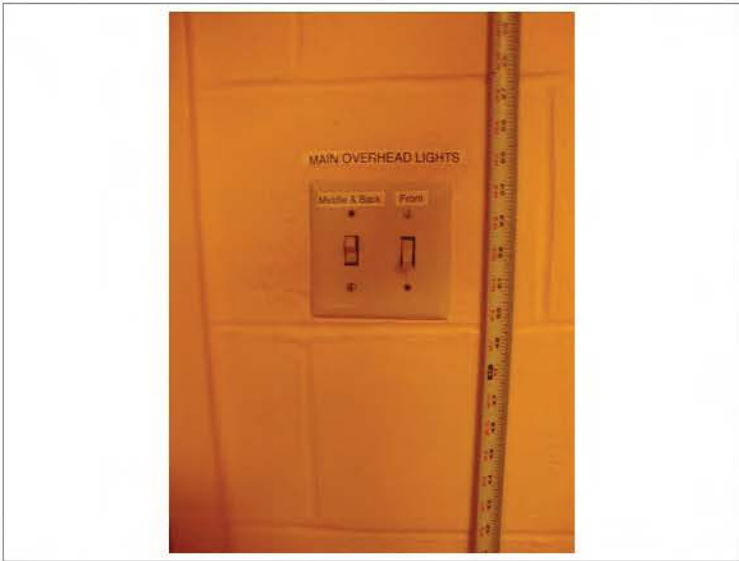


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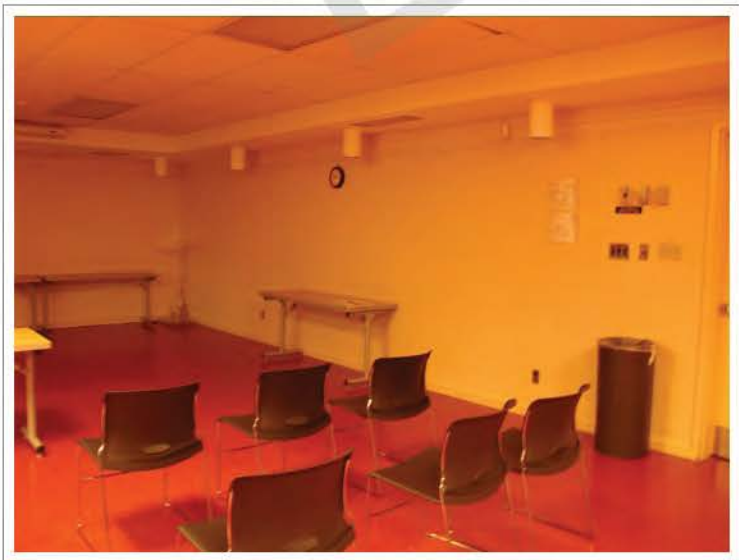
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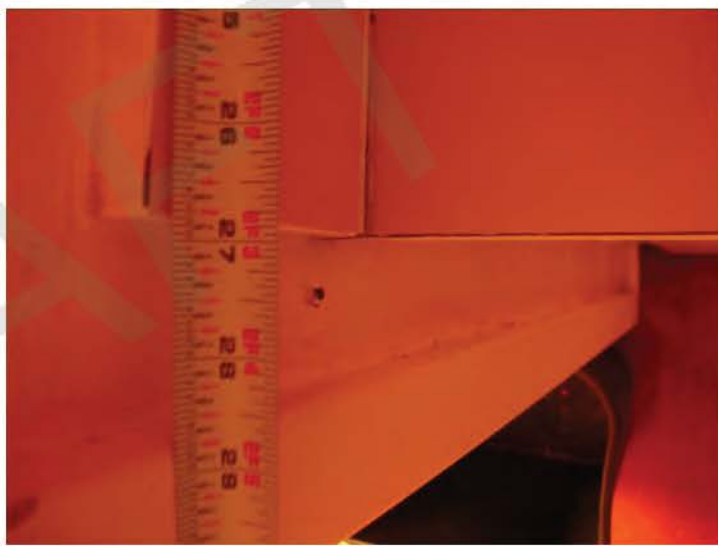
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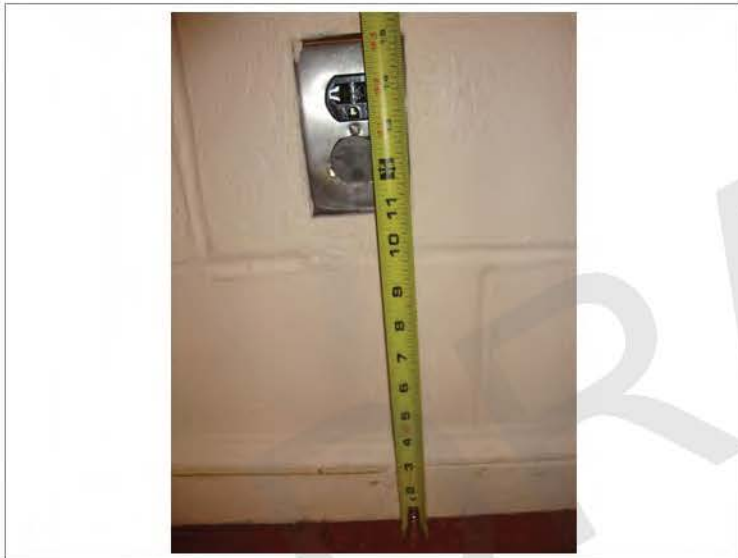
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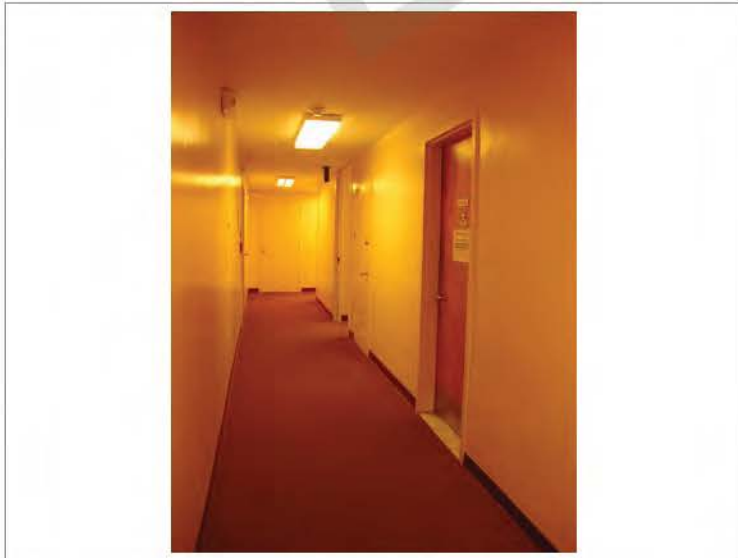
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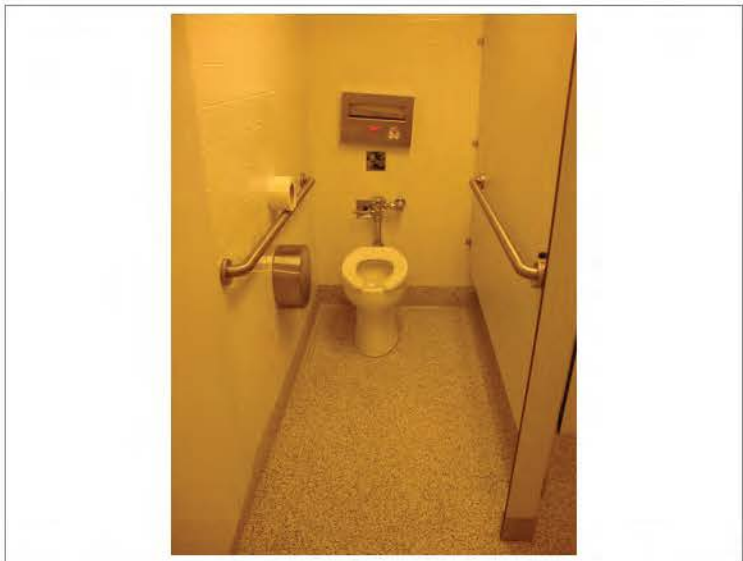


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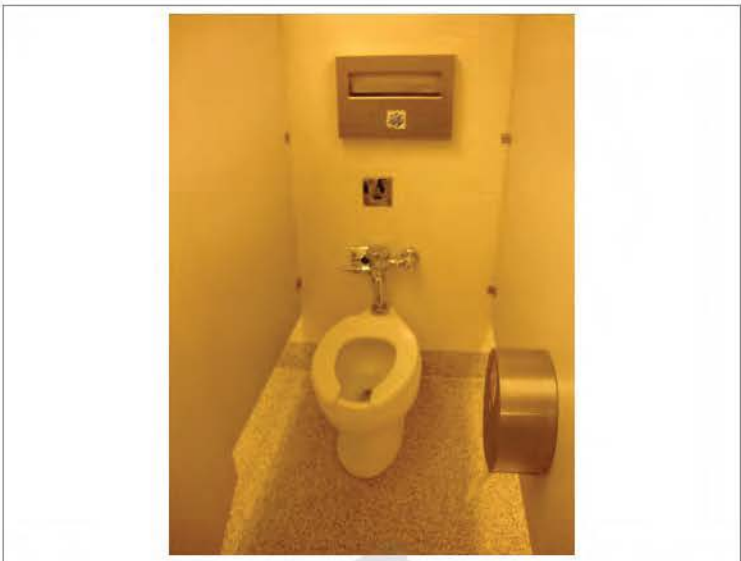


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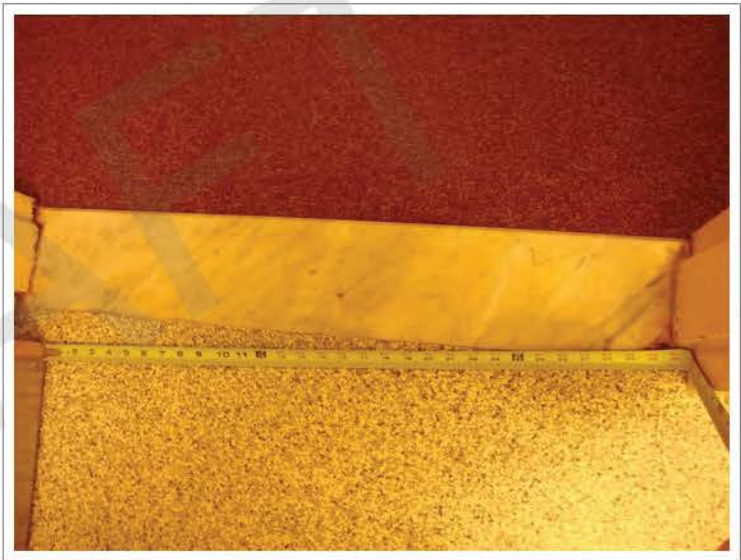
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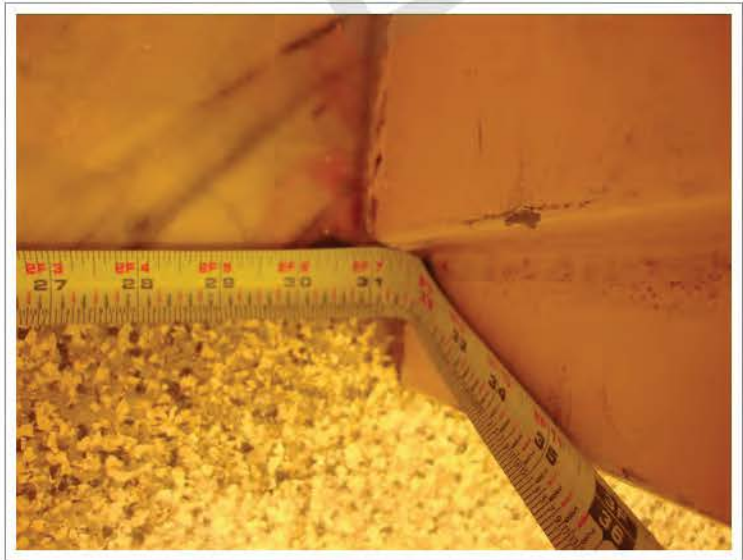
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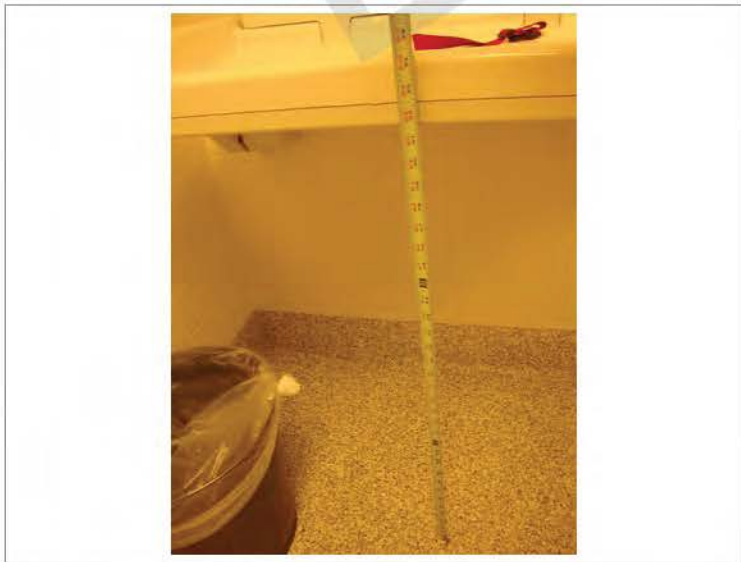
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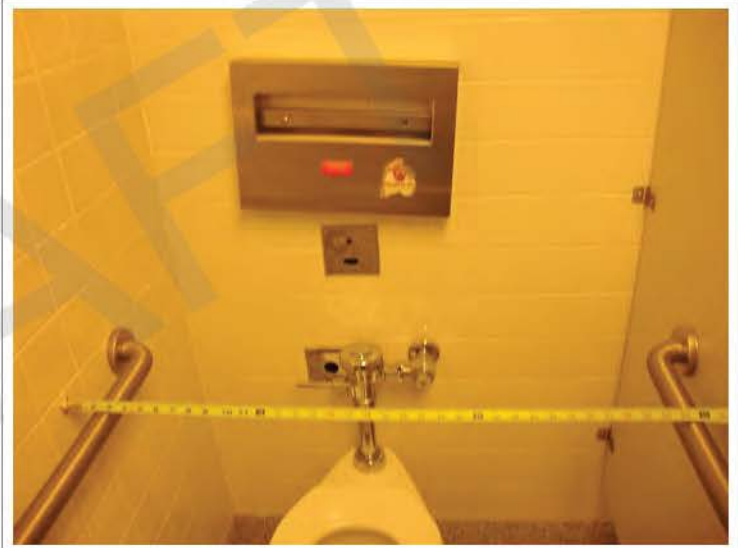
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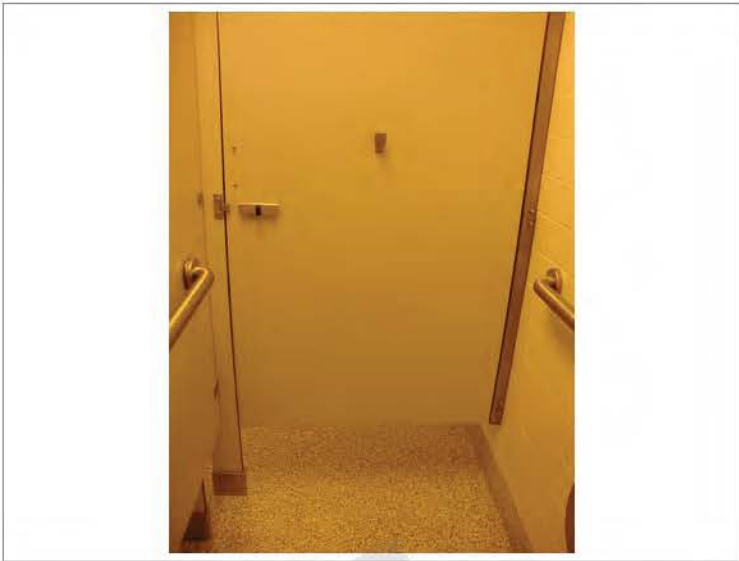


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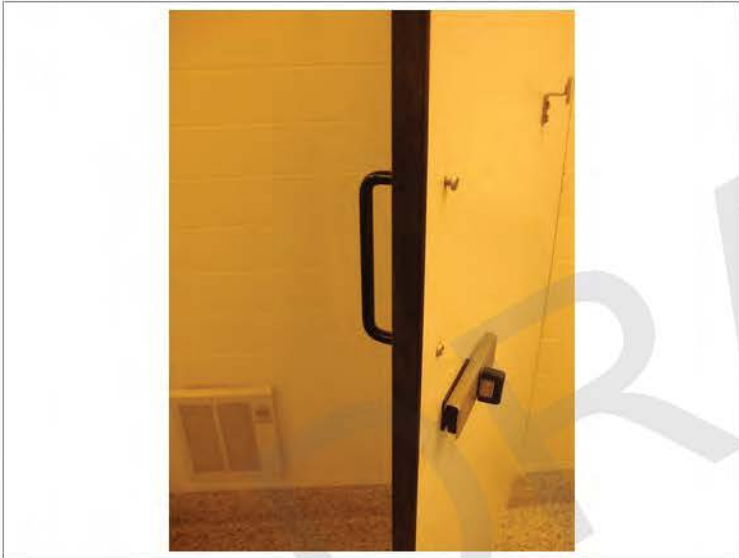
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Chevy Chase Library - (486)

J-Appendices:

Section-3

Passenger Elevator Report: VDA

Vertical
Transportation
Systems
Consultants



202-851-3368

E-mail: contact@vdassoc.com

Van Deusen & Associates, Inc. 601 13th Street NW, Suite 900 South • Washington, DC 20005

June 5, 2019

VIA E MAIL
ssayal@sheladia.com

Mr. Shubhankar Sanyal
SHELADIA Associates, Inc.
15825 Shady Grove Road, Suite 100
Rockville, MD 20850

Re: Chevy Chase Library, Chevy Chase, MD - Vertical Transportation - VDA No. 58242

Dear Mr. Sanyal:

In accordance with our agreement, VDA® (Van Deusen & Associates, Inc.) performed an evaluation of one (1) hydraulic passenger elevator located at the above referenced property on May 8, 2019. Please find attached our report.

Should you have any questions or require additional information, please contact our office.

Very truly yours,

A handwritten signature in black ink, appearing to read "Brian Dressel", is written over a horizontal line.

Brian Dressel
Associate

BD/hmm

Attachment

Headquarters: East Hanover, NJ

Albuquerque, NM • Atlanta, GA • Baltimore, MD/Washington, DC • Boston, MA • Charlotte, NC • Chicago, IL • Dallas, TX • Denver, CO • Des Moines, IA
Houston, TX • Indianapolis, IN • Kauai, HI • Los Angeles, CA • Miami, FL • Milwaukee, WI • Minneapolis, MN • Missoula, MT • Myrtle Beach, SC
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www.vdassoc.com

Vertical
Transportation
Systems
Consultants



202-851-3368

E-mail: contact@vdassoc.com

Van Deusen & Associates, Inc. 601 13th Street NW, Suite 900 South | Washington, DC 20005

SURVEY EVALUATION REPORT

FOR

ONE (1) HYDRAULIC PASSENGER ELEVATOR

AT

CHEVY CHASE LIBRARY

8805 CONNETICUT AVENUE

CHEVY CHASE, MD

Prepared for:

SHELADIA Associates, Inc.
15825 Shady Grove Road, Suite 100
Rockville, MD 20850

Date: June 4, 2019

VDA No. 58322/BD

Headquarters: East Hanover, NJ

Albuquerque, NM • Atlanta, GA • Baltimore, MD/Washington, DC • Boston, MA • Charlotte, NC • Chicago, IL • Dallas, TX • Denver, CO • Des Moines, IA
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www.vdassoc.com

SCOPE OF WORK

VDA surveyed one (1) elevator at the referenced property on May 8, 2019. The purpose of the audit and systems analysis is to identify the primary equipment, determine the maintained condition of major components, record operating performance levels and evaluate the vertical transportation based on applicable industry and code standards.

Our report is arranged in sections as follows:

EXECUTIVE SUMMARY	Page 2
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SECTION I - EQUIPMENT EVALUATION	
- Life Cycle Analysis	Page 3
- Americans with Disabilities Act Compliance Survey	Page 4

SECTION II - MAINTAINED CONDITION EVALUATION	
- Itemized Deficiencies	Page 6
- Recorded Operating Performance Chart	Page 7

SECTION III - CONCLUSIONS AND RECOMMENDATIONS	
- Recommendations:	
- Remedial Work	Page 9
- Upgrading and/or Modernization	Page 9
- Budget.....	Page 9

APPENDICES

A - Systems Profile.....	Page A - 1
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EXECUTIVE SUMMARY

VDA® (Van Deusen & Associates, Inc.) performed a comprehensive survey of Elevator PE1 at the referenced property on May 8, 2019. The purpose of this survey and report is to review the operational characteristics, current conditions, adequacy of maintenance and remaining useful life of one (1) hydraulic passenger elevator.

The vertical transportation equipment at this location consists of one (1) hydraulic passenger elevator. The elevator was manufactured and installed by ESCO Elevator Company in 1991. The installation featured quality components which are mostly still available and maintainable. The exception to the maintainable components is the elevators selector / positioning system, which is obsolete with most replacement parts unavailable. The upgrade should be planned for and completed immediately to avoid unplanned down time. The estimated cost for this upgrade is \$25,000 to \$35,000. We find the overall quality of Elevator Control Service's (ELCON) maintenance program to be fair as related to industry standards.

Elevator PE1 has a rated capacity of 2,000lbs. and serves three (3) landings (B, *L, 1R) with a designed contract speed of 125fpm (feet per minute). The door configuration for Elevator PE1 is 3'-4" wide x 7'-0" high, with two-speed, side opening doors. This elevator features a rear opening at the "LR" landing.

The 1991 installation utilized relay logic controls with a submersible hydraulic power unit and direct lift in-ground hydraulic piston / cylinder. The door equipment for this elevator was manufactured by MAC and appears to be original to the installation. Complete details of equipment type, age and configuration are provided in System Profile section of this report.

On-site documentation indicates that Code-mandated annual safety testing is current with the annual tests having been completed in October 2018.

The Life Cycle section of our report compares the existing component age with the projected design life to determine the estimated remaining useful life of the component.

Items observed and listed in the Itemized Deficiencies section represent a snapshot in time during the ongoing preventive maintenance program progress.

LIFE CYCLE ANALYSIS

Elevator I.D.: PE1

Date: 5/8/19

Component/System	Projected Design Life (Years)	Present Age (Years)	Remaining Useful Life (Years)	Condition Comments	Recommended Action
MACHINE ROOM					
1. Pumping Unit/Tank	25-30	28	10+	Fair	Routine Maintenance
2. Valve	20-25	UNKN	10+	Fair	Routine Maintenance
3. Drive Motor	20-25	UNKN	10+	Fair	Routine Maintenance
4. Motion Controls	20-25	28	10+	Fair	Routine Maintenance
HOISTWAY AND PIT					
1. Plunger - Seals	20-25	28	10+	Fair	Routine Maintenance
2. Guide Rails	75+	28	20+	Good	Routine Maintenance
3. Hoistway Door Equipment	25-30	28	5 - 7	Fair	Routine Maintenance
CAR EQUIPMENT					
1. Car Door Equipment	20-25	28	5 - 7	Fair	Routine Maintenance
2. Cab Enclosure	20-30	28	10+	Fair	Routine Maintenance
3. Car Frame	50-75	28	10+	Good	Routine Maintenance
OPERATING/SIGNAL EQUIPMENT					
1. Fixtures	20-25	28	10+	Fair	Routine Maintenance

THE AMERICANS WITH DISABILITIES ACT (ADA)

The "ADA" is a Civil Rights act passed by the United States Congress and is enforced by the Department of Justice. It prohibits discrimination against the disabled in employment, state and local government services, public transportation, public accommodations and telecommunications.

ADA is a federal "compliance" law whereby an individual may file a lawsuit if he/she believes grounds for discrimination exist or are about to occur as a result of a lack of action. The ADA is not a local or state building code. Enforcement is currently triggered by inspection following a civil action filed by an offended party rather than a local or sub-code official's inspection of conditions in a building.

The intent of this survey/evaluation is to provide technical assistance in the area of vertical transportation systems requirements for existing, altered and new buildings subject to the guideline applicability (ADAAG).

The ADA and its implementing regulations place numerous obligations on property owners, employers, local and state governments, retail establishments, places of public accommodation and commercial facilities. Determining the scope of these obligations is a legal judgement that must be made by individuals responsible in consultation with their qualified legal advisers. Our audit is limited to observed conditions, operations and signaling as compared to the ADAAG Part 4 published standards.

The following survey information and associated data should not be construed as a recommendation of VDA or any of its employees. The decision to implement all, some or none of the technical changes applicable remains with our clients and/or the responsible entities they represent. The purpose of the audit is to provide a yardstick for others to measure the impact that compliance may have on existing systems.

**THE AMERICANS WITH DISABILITIES ACT
ELEVATOR SYSTEMS ADA COMPLIANCE SURVEY**

ELEVATOR PE1

DATE: 5/8/19

"S" DENOTES SATISFACTORY

"U" DENOTES UNSATISFACTORY

COMPLIANCE ITEM/CATEGORY	S	U	CONDITION COMMENTS
ASME A17.1 Safety Code	X		Per code year modernized.
Cab Enclosure (layout, door size, illumination and flooring)	X		
Car Operating Panel(s) (design, location and function)	X		
Car Signals and Communications (indicators and communications)	X		
Car and Corridor Entrances (size, signage and Re-opening device)	X		
Corridor Fixtures (operation, signals and location)	X		
Operational Functions (automatic leveling and door timing)	X		
Additional Notes and Evaluation Clarifications			

ITEMIZED DEFICIENCIES

Elevator PE1:

1. There is no Maintenance Control Plan available in the elevator machine room.
2. There is no current maintenance check chart available in the elevator machine room.
3. There is no current oil loss log available in the elevator machine room.
4. Elevator machine room should be cleaned of dirt and debris.
5. Selector cover on top of car is not installed.
6. Elevator pit should be cleaned of dirt and debris.

RECORDED OPERATING PERFORMANCE

42" SINGLE-SPEED, CENTER OPENING DOORS	ELEV. PE1	ELEV. PE1 REAR	ACCEPTABLE STANDARDS FOR THIS EQUIPMENT
A. SPEED - UP DIRECTION (FPM)	N/E	N/E	125
B. SPEED - DOWN DIRECTION (FPM)	N/E	N/E	125
C. DOOR OPENING TIME (SEC)	3.5	*4.1	3.0 to 3.7
D. DOOR CLOSING TIME (SEC)	*3.9	*4.1	6.0 to 7.2
E. DOOR OPEN DURATION - CAR CALL (SEC)	*6.9	*6.7	3.0 to 5.0
F. DOOR OPEN DURATION - HALL CALL (SEC)	6.6	6.5	4.0 to 7.0
G. DOOR OPEN DURATION - AFTER PROTECTIVE SHIELD IS RE-ESTABLISHED (SEC)	*6.5	*6.4	.5 to 1.5
H. FLOOR TO FLOOR PERFORMANCE TIME (SEC)	20.0	N/E	18.0 to 20.0
I. STOPPING ACCURACY (INCHES)	$\pm \frac{1}{4}$	$\pm \frac{1}{4}$	$\pm \frac{1}{2}$
J. CAR DOOR CLOSING PRESSURE (LBS)	18	*>30	30 maximum

* DENOTES UNACCEPTABLE CONDITION BASED ON STANDARDS SPECIFIED.

N/E - denotes "No Evaluation" of referenced standard performed.

N/A - denotes standard is "Not Applicable" to these systems.

N/O - denotes "Not Operative" at time of evaluation.

DEFINITIONS AND MEASUREMENTS
OF ITEMS LISTED IN
RECORDED OPERATING PERFORMANCE

- A&B. **Speed** is the rate at which the measured unit travels. The speed has not been measured, but was observed to be adequate for the intended application.
- C. **Door Opening Time** is defined as the start of car doors opening until they are fully opened. The time was measured in seconds from the moment the car doors start to open until the car doors are fully open (i.e., motion stops).
- D. **Door Closing Time** is defined as the start of the car doors closing until fully closed. The time was measured in seconds from the moment the car doors start to close until the car doors are fully closed (i.e., motion stops).
- E. **Door Open Duration for a Car Call** is defined as the length of time the car doors remain fully open in response to a car call without anyone passing through the protective shield. This time was measured in seconds from the stop in the open motion of the car doors until the start of the closing motion of the car door.
- F. **Door Open Duration for a Hall Call** is defined as the length of time the car doors remain fully open in response to a lobby call without anyone passing through the protective shield. This time was measured in seconds from the stop in the open motion of the car doors until the start of the closing motion of the car doors.
- G. **Door Open Duration After Protective Shield is Re-Established** is defined as the length of time the car doors remain open after an object has passed through the protective shield until the car doors begin to close. This time was measured in seconds from the stop in the motion of the car doors until the re-start of the closing motion of the car doors.
- H. **Floor to Floor Performance Time** is defined as the time required for the movement of a car between two (2) floors, including the door closing and effective door opening for passenger transfer. The time was measured in seconds from the start of door closing at one floor until the car was stopped (within stopping accuracy) at the next floor with the doors opened for passenger transfer.
- I. **Stopping Accuracy** is the distance between the car and hoistway sills when the car is stopped at a floor and was measured as the vertical distance (in inches) between the horizontal planes of the car and hoistway sills when the car is stopped at a floor.
- J. **Car Door Closing Pressure** is the amount of force required to hold a door from closing after stalling the door, by external means, at about 1/3 of the closing distance. The door pressure was measured in pounds and was recorded upon removal of the physical block.

RECOMMENDATIONS

Remedial Repair:

The observed preventive maintenance condition indicates the elevator at this property is fairly maintained for the age and type of equipment currently installed, in our opinion. A number of routine deficiencies were noted for correction. Remedial maintenance and repair work to the elevator equipment noted above should be covered under the existing preventive maintenance agreement and should be resolved at no charge to Ownership. We recommend that a copy of the "Itemized Deficiencies" section of this report be forwarded to your maintenance provider, advising that they remedy conditions covered under their maintenance agreement within sixty (60) days of receipt.

Recommendations:

It is VDA's opinion that there is no current need for a comprehensive modernization. However, an upgrade of the existing car selector system should be considered immediately to ensure safe, reliable elevator service. Planning should begin in the near future based on the schedule indicated below.

Budgeting for a typical elevator selector upgrade should include the following:

- Elevator PE1 \$25,000 to \$35,000

The above estimates are in today's dollars and based on competitive bidding to qualified contractors in the Washington, DC metropolitan area.

Appendix A
Vertical Transportation
Systems Profile

VDA No.	58242
Location:	Montgomery County Chevy Chase Library 8805 Connecticut Avenue Chevy Chase, MD
Building Type:	Library
Unit I.D.:	PE1
Type of System:	Hydraulic Passenger
A. <u>General Information:</u>	
Capacity (lbs.)/Loading:	2,000 / Class "A" Passenger
Rated Speed (fpm):	125
Floors Served:	Two (2) Front Openings (B, *1) Rear Opening (1R)
Machine Type/Location:	Submersible / Remote @ "B" Level
Control Type:	Relay Logic
Sequence of Operation:	Simplex
Door Configuration/Size:	Two-Speed Side Opening 3'-4" W x 7'-0" H
Power Supply/Drive:	208 v, 3 ph, 60 hz
Installation Contractor/Date:	ESCO Elevator / 1991
Present Service Company:	Elevator Control Service
Date / Type of Last Testing:	10/2019 / Category 1

J-Appendices:

Section-4

Building Envelop Evaluation: Gale Associates, Inc.



Gale Associates, Inc.

1122 Kenilworth Drive | Suite 206 | Towson, MD 21204-2143

P 443.279.4500 F 443.279.4560

www.galeassociates.com

April 12, 2019

Montgomery County
Division of Building Design and Construction
Department of General Services
101 Monroe Street, 11th Floor
Rockville, MD 20895

Attn: Mr. Gary F. Colton, P.E.
Capital Project Manager
Project Management Section
T: 240-777-6119
Gary.Colton@montgomerycountymd.gov

Re: Engineering Consulting Services
Building Enclosure Evaluation
Chevy Chase Library
8005 Connecticut Avenue
Chevy Chase, MD 20815
Gale JN: 656137

Dear Mr. Colton:

In accordance with your request, Gale Associates, Inc. (Gale) visited the above-mentioned facility on April 2, 2019 to perform a building enclosure evaluation to include the roof, walls, windows, and the lower level meeting room's interior exposed walls. The Chevy Chase Library is scheduled to receive various facility improvements/upgrades. The library is a two-story building with a footprint of approximately 14,000 sf. The façade consists of brick veneer with punched window openings consisting of original wood, single hung assemblies with single pane glazing. The roof, which is sloped approximately 7-inches per foot, is covered with original slate tiles. Ornamental wood dental molding exists along the eaves and at the gable ends. Our assessment was performed to provide Montgomery County (MC) with opinions regarding the condition of the in-place envelope assemblies and to provide budgeting information for repairs to be included in the facility upgrade project.

OBSERVATIONS

The roof and associated flashings were observed from a ladder at typical locations. The exterior walls, windows, doors, and below-grade conditions were viewed from the ground. The interior of the building was accessed to observe damages to interior finishes and to access the attic space to confirm insulation assemblies. The following observations were noted:

CELEBRATING 50 YEARS



INTERIOR

- Gale accessed the attic to determine the existing insulation assemblies. The insulation consists of foil-faced batt insulation with an R-value of 19.
- The lower level meeting room's exposed CMU walls exhibited peeling paint and efflorescence, primarily on the east and west elevations (at walls below grade). The north facing wall, which opens onto an exterior courtyard, appears to be in generally good condition (Photo 2).

ROOF

- The roof consists of random-sized purple and green slate shingles. Isolated slate shingles were observed to be broken or displaced, mostly along roof edges (Photos 3, 4, 5, and 6). In general, the slate shingles appear to be in fair condition given their age.
- EPDM repairs were observed at isolated valleys (Photos 7 and 8).
- Peeling paint and isolated rot was noted throughout the wood dormers, fascia, and dental molding. (Photos 3, 8, 9, and 10).
- The gutters assemblies vary between built-in and hung assemblies. The gutters and downspouts appear to be in generally fair condition (Photos 4 and 7). Repair attempts were noted at a downspout on the east elevation (Photo 10).

WALLS

- The exterior brick masonry walls appear to be in generally good condition with no significant defects noted.
- Staining and deteriorated mortar joints were noted in the screenwall on the south elevation and the retaining wall on the north elevation (Photos 11 and 12).

WINDOWS AND DOORS

- In general, the window systems appear to be in poor condition. Broken glazing, peeling paint, and isolated rot were noted throughout.
- The exterior doors exhibited similar deteriorated conditions as observed on the windows (Photos 13 and 14).

CURTAINWALL SYSTEM

- The curtainwall assembly at the entrance vestibule on the west elevation is in generally poor condition. Gale noted deteriorated gypsum board and staining on the interior brick indicative of moisture intrusion (Photo 15).

BELOW-GRADE

- The exterior face of the below-grade perimeter walls appears to have a parge coat with dampproofing. No waterproofing membranes were observed (Photo 16 and 17).



- On the northwest elevation correlating with the deteriorated interior meeting room wall, Gale noted that the entrance ramp and the garden wall prevent stormwater from draining. (Photos 18).

CONCLUSIONS/RECOMMENDATIONS

Based on the conditions observed, Gale presents the following conclusions and recommendations for consideration:

The slate roof is in generally fair condition given its age. Isolated slate repairs and sheet metal repairs to include edges and valleys, will likely be required to maintain the roof in serviceable condition. The wood trim throughout, including the fascia, dormers, doors, windows, and dental molding, is in generally fair to poor condition. Consideration should be given to scraping, priming, and painting all wood trim, and a contingency for replacing isolated rotted areas should be carried. Gale recommends replacing the exterior doors and windows throughout. The curtainwall assembly at the west entrance vestibule is in generally poor condition and appears to be a source of moisture intrusion. Replacement of the curtainwall assembly should be considered as a part of this project. The conditions observed in the lower level meeting room are likely caused by moisture penetrating the CMU walls due to the lack of an appropriate waterproofing membrane. Regrading the landscaped areas and providing provisions for drainage on the northwest side will likely mitigate the moisture intrusion being experienced. Excavation and installation of a waterproofing membrane should be considered.

RECOMMENDATIONS

Repair the slate roof (+/-20% of area).....	\$150,000 - \$200,000
ALTERNATE - Replace roof (slate tiles).....	\$750,000 - \$800,000
Scrape, prime, and paint wood trim throughout.....	\$10,000 - \$15,000
Replace entry vestibule curtainwall assembly.....	\$15,000 to \$20,000
Replace windows and exterior doors throughout.....	\$50,000 to \$100,000

ADDITIONAL RECOMMENDATIONS:

Gale recommends installation of a sheet metal parapet cap and repointing repairs on the south screenwall to prevent further deterioration. Gale also recommends repointing the retaining wall on the north elevation.

Mr. Gary F. Colton, P.E.
Montgomery County
Re: Building Enclosure Evaluation – Chevy Chase Library
April 12, 2019
Page 4 of 4



Gale anticipates that this report meets your needs at this time. If you would like to discuss any of the observations or recommendations in this report, please feel free to contact us.

Sincerely,
GALE ASSOCIATES, INC.

A handwritten signature in blue ink, reading "Sherre L. Bartlett". The signature is fluid and cursive, with the first name "Sherre" and last name "Bartlett" clearly distinguishable.

Sherre L. Bartlett, Assoc. AIA, CDT
Building Enclosure Design and Consulting Group

SLB/ded

Enclosure: Photographic Documentation (9 pages)

P:\656137\01 Evaluation\Report\ltr report

PHOTOGRAPHIC DOCUMENTATION



Photo 1: Chevy Chase Library.
See Photo 18 for northwest landscaping (red arrow). See Photo 15 for interior curtain wall leak (blue arrow).



Photo 2: Typical peeling paint and efflorescence observed on the north and south CMU walls in the lower level meeting room.

PHOTOGRAPHIC DOCUMENTATION



Photo 3: View of the southwest elevation. See Photo 4 for typical built-in gutter (red arrow).
See Photo 7 for typical hung gutter (blue arrow).



Photo 4: Typical copper built-in gutter assembly.
Isolated damaged slate tiles noted at this edge.

PHOTOGRAPHIC DOCUMENTATION



Photo 5: Partial view of the east elevation.
See Photo 6 for typical slate shingle displacement (red arrow).



Photo 6: Slate shingle displacement along the roof edge (red arrow).

PHOTOGRAPHIC DOCUMENTATION



Photo 7: Typical sheet metal hung gutter assembly.
Note EPDM membrane repairs observed in valley (red arrow).



Photo 8: Partial view of the north elevation.
See Photo 9 (red arrow) and Photo 10 (blue arrow).

PHOTOGRAPHIC DOCUMENTATION



Photo 9: Dormer shown in Photo 8. Note the peeling paint.



Photo 10: Downspout shown in Photo 8. Peeling paint and isolated rot noted throughout the fascia assembly. Note the repairs at the downspout.

PHOTOGRAPHIC DOCUMENTATION



Photo 11: Partial view of the southeast elevation.
Note the staining on the screen wall. The mortar throughout is in generally deteriorated condition.



Photo 12: Deteriorated mortar on the north retaining wall.

PHOTOGRAPHIC DOCUMENTATION



Photo 13: Partial view of the north elevation.
See Photo 14 for the below grade entrance.



Photo 14: The below grade entrance into the lower level meeting room.
See Photo 12 for deteriorated conditions in the retaining wall (red arrow).

PHOTOGRAPHIC DOCUMENTATION



Photo 15: View of staining on interior brick, indicative of moisture intrusion from the curtainwall.



Photo 16: Partial view of the east elevation.
See Photo 17 for the observed below grade conditions (red arrow).

PHOTOGRAPHIC DOCUMENTATION



Photo 17: Parge coating with dampproofing was noted throughout the building exterior.



Photo 18: Note the garden wall and ramp prevent drainage of the landscaping area.
See Photo 2 for correlating defects on the meeting room walls.

J-Appendices:

Section-5

Hazmat Report: Apex Companies, LLC.



October 30, 2018

Mike Lowe, P.E.
Project Management Section
Division of Building Design and Construction
Department of General Services
Montgomery County
101 Monroe Street, 11th Floor
Rockville, Maryland 20850

**Re: Hazardous Building Materials Inspection
Chevy Chase Library
8005 Connecticut Avenue
Chevy Chase, Maryland 20815
Apex Job No: MCDGS-117-01**

Dear Mr. Lowe:

Apex Companies, LLC (Apex) is pleased to present the following summary report of the hazardous materials inspection at the Chevy Chase Library, located at 8005 Connecticut Avenue in Chevy Chase, Maryland. Inspection services were performed on October 11 through October 16, 2018 in accordance with Apex's proposal for work dated August 28, 2018.

Should you have any questions or need any additional information, please feel free to contact me at your earliest convenience.

Sincerely,
Apex Companies, LLC

A handwritten signature in blue ink, appearing to read 'C. Weaver'.

Christopher Weaver
Project Manager
Maryland Division



HAZARDOUS BUILDING MATERIALS INSPECTION

For:

**Chevy Chase Library
8005 Connecticut Avenue
Chevy Chase, Maryland 20815**

Apex Job No.: MCDGS-117

October 30, 2018

Prepared for:

Mike Lowe, P.E.
Project Management Section
Division of Building Design and Construction
Department of General Services
Montgomery County
101 Monroe Street, 11th Floor
Rockville, Maryland 20850

Prepared by:

A handwritten signature in blue ink, appearing to read 'Robert Rock', written over a horizontal line.

Robert Rock
Industrial Hygienist
Maryland Division

Reviewed by:

A handwritten signature in blue ink, appearing to read 'CW', written over a horizontal line.

Christopher Weaver
Program Manager
Maryland Division

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LIST OF ACRONYMS

ACM	Asbestos-Containing Material
AHERA	Asbestos Hazard Emergency Response Act (40 CFR Part 763)
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
EPA	United States Environmental Protection Agency
HAZCOM	Hazard Communication
HEPA	High Efficiency Particulate Air Filter
HVAC	Heating, Ventilation, and Air Conditioning
LBP	Lead-based Paint
NESHAP	National Emission Standards for Hazardous Air Pollutants
NIST	National Institute of Standards and Technology
NOB	Non-friable Organically Bound
NVLAP	National Voluntary Laboratory Accreditation Program
OSHA	Occupational Safety and Health Administration
PACM	Presumed Asbestos Containing Material
PCM	Phase Contrast Microscopy
PEL	Permissible Exposure Limit
PLM	Polarized Light Microscopy
TEM	Transmission Electron Microscopy
TSCA	Toxic Substances Control Act
TSI	Thermal System Insulation
UL	Underwriters Laboratory

1.0 EXECUTIVE SUMMARY

At the request of Montgomery County Department of General Services, Apex Companies, LLC (Apex) conducted a hazardous materials inspection of the Chevy Chase Library, located at 8005 Connecticut Avenue in Chevy Chase, Maryland. The project areas were inspected for the presence of asbestos-containing materials (ACM), lead-based paint (LBP), and other hazardous substances (PCBs, mercury). The inspection services were conducted on October 11 through October 16, 2018 in accordance with Apex's proposal for services dated August 28, 2018.

Asbestos Inspection

Asbestos-containing material is defined by federal and the State of Maryland regulations as material that contains greater than one (1) percent asbestos. Twenty-five (25) suspect ACMs were identified and seven (7) were confirmed to contain greater than one (1) percent asbestos. The laboratory results/chain-of-custody for all bulk samples collected by Apex during the asbestos inspection are included in **Appendix B**. A photolog of identified homogeneous areas is included in **Appendix C**. A list of all homogeneous materials bulk sampled are contained in **Table 1**.

Analytical results confirmed the following materials to be ACM:

- Beige window caulking on exterior of windows;
- Yellow and black residual carpet mastic located throughout the 1st Floor;
- Black mastic associated with grey floor tile located in the lower level meeting room and corridor;
- Black mastic associated with Beige 12"x12" floor tile in the lower level elevator machine room;
- Black seam sealant on fiberglass pipe insulation in the lower level corridor and meeting room;
- Black mastic associated with Pink/Beige 12"x12" floor tile in the 1st Floor staff kitchen; and,
- Grey door caulking on exterior of entry doors.

Lead Inspection

Accessible interior and exterior areas of the subject property were inspected for lead-based paint. Apex conducted the lead inspection by using a portable x-ray fluorescence (XRF) analyzer. Apex on-site XRF lead-based paint (LBP) inspection revealed detectable levels of lead on certain building components of the property. The current definition of LBP established by the State of Maryland is greater than 0.7 milligrams of lead per square centimeter of surface area ($> 0.7 \text{ mg/cm}^2$). All XRF test results are found in **Table 2**.

Results of the lead inspection concluded that the following materials are LBP ($> 0.7 \text{ mg/cm}^2$):

- Red painted metal hand rail in the lower level mechanical room; and,
- Beige ceramic wall tile in the lower level corridor.

Apex notes that detectable levels of lead below the State of Maryland's definition of LBP were reported in paint on multiple building components. Work practices involving the disturbance of such lead-containing paints or other materials are regulated under the OSHA's *Lead in Construction Standard* in Title 29 of the CFR Part 1926.62. As a result, all construction and demolition activities involving lead-containing materials (regardless of the lead content) must comply with the OSHA standard, which prescribes requirements for contractor/worker exposure assessment, worker protection, and engineering controls.

Mercury and PCB Inspections

Apex reviewed the fluorescent lighting ballasts at the site for the presence of Polychlorinated Biphenyls (PCB). Ballasts of representative lighting fixtures were identified and visually inspected. None were observed to be suspect of containing PCB. Apex identified fluorescent lamps throughout the inspected areas of the subject building that are suspected to contain mercury.

Approximately five hundred and thirty (530) 4-foot fluorescent bulbs were identified. If light ballasts that are not labeled "No PCBs" are identified on site during renovations at the facility, it should be assumed to contain PCBs and disposed of in accordance with the regulations outlined in Volume 40 Code of Federal Regulations (CFR) Part 761.

Furthermore, Apex did not observe any expansion joint compound or exterior caulking that potentially contains PCBs.

Mold Inspection

Apex also performed an inspection for suspect microbial growth and water damage throughout the subject property. Apex observed approximately 150 linear feet of mold impacted fiberglass pipe insulation located in the crawlspace on the lower level.

2.0 ASBESTOS INSPECTION

Apex State of Maryland accredited asbestos inspectors, Mr. Robert Rock and Peter Braun, performed an inspection of the interior and exterior areas of the Chevy Chase Library located at 8005 Connecticut Avenue in Chevy Chase, Maryland. Apex conducted an asbestos inspection of the site using guidelines set forth by the Occupational Safety and Health Administration (OSHA) and the U.S. Environmental Protection Agency (EPA).

Materials that were considered suspect were identified and the number of samples to be collected of these suspect materials was determined by the inspector using the Asbestos Hazard Emergency Response Act (Title 40 CFR Part 763) (AHERA) protocols. As defined by AHERA policy, suspect materials include the following building material types:

1. Surfacing Materials – including spray-applied or troweled-on wall/ceiling coatings;
2. Thermal System Insulation (TSI) – including pipe insulation, and mudded pipe elbows, and;
3. Miscellaneous Materials –including ceiling tile, floor tiles and mastics, gaskets (if accessible), fire doors, wallboard and spackling.

Suspect materials that are homogeneous in nature (i.e., uniform in color and texture) were identified, touched to determine friability, and sampled by removing a small piece that was then placed in a labeled container. For a given homogeneous area, one (1) or more samples were collected in a randomly distributed manner in accordance with AHERA provisions as referenced in the OSHA Asbestos in Construction standard (Title 29 CFR 1926.1101). Materials not considered by the AHERA standard as suspect ACM were not addressed by Apex during this inspection, unless specifically referenced.

Table 1 contains a list of all homogeneous materials bulk sampled. Each suspect material is grouped by texture and color. In total, due to layering, eighty-four (84) laboratory analyses of samples collected were performed from twenty-five (25) identified homogeneous building materials.

All bulk samples were sent to EMSL Analytical, Inc. (EMSL), of Beltsville, Maryland, a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory and analyzed using polarized light microscopy in conjunction with dispersion staining (PLM/DS) to determine asbestos content. **Appendix A** contains a site drawing of sample locations and identified ACM. **Appendix B** contains the laboratory results/chain-of-custody for all bulk samples collected by Apex during the asbestos inspection. A photolog of identified homogeneous areas is included in **Appendix C**.

Table 1
Homogeneous Materials List
Chevy Chase Library
8005 Connecticut Avenue
Chevy Chase, Maryland
(All materials suspected of being asbestos-containing)

HA#	Description of Material	Friable (Yes/No)	Location	Sample Numbers	ACM ^a (Yes/No)	Approx. Quantity
Surfacing Materials						
11	White Rough Textured Plaster Ceiling	No	Lower Level Mechanical Room	B28, B29, B30, B31, B32	No	--
21	White Skim Coat and Brown Rough Coat Plaster Drop Ceiling	No	Lower Level Corridor and Meeting Room	B51, B52, B53, B54, B55	No	--
Thermal System Insulation (TSI) Materials						
None Observed						
Miscellaneous Materials						
1	Beige Window Caulking	No	Exterior of Windows	B1, B2	Yes 4% Chrysotile	15 ea.
2	White Window Glazing	No	Exterior of Windows	B3, B4	No	--
3	Yellow Carpet Mastic with Residual Black Mastic	No	Throughout 1st Floor	B5, B6, B7	Yes 2-3% Chrysotile	8,500 s.f.
4	Yellow Carpet Mastic on Concrete Slab	No	1 st Floor Entry	B8, B9	No	--
5	White Drywall	No	Throughout Building	B10, B11, B12, B13, B14	No	--
6	White Joint Compound	No	Throughout Building	B15, B16, B17, B18	No	--
7	Brown/Yellow Mastic associated with Rubber Cove Base	No	1 st Floor	B19, B20	No	--

HA#	Description of Material	Friable (Yes/No)	Location	Sample Numbers	ACM ^a (Yes/No)	Approx. Quantity
8	Red 12"x12" Vinyl Floor Tile and Yellow Mastic with Grey Leveling Compound	No	Lower Level Meeting Room above HA-9 (1 st Layer)	B21, B22	No	--
9	Grey Vinyl Floor Tile and associated Black Mastic	No	Lower Level Meeting Room below HA-8 (2nd Layer) and Lower Level Corridor	B23, B24, B25	Yes Mastic Only 3% Chrysotile	1,400 s.f.
10	Brown/Yellow Mastic Underneath Grey Rubber Stair Tread	No	Stairwell	B26, B27	No	--
12	Red Mastic on Metal HVAC Duct	No	Lower Level Mechanical Room	B33, B34	No	--
13	Green Mastic on Metal HVAC Duct	No	Lower Level Mechanical Room	B35, B36	No	--
14	Brown Mastic on Metal HVAC Duct	No	Lower Level Mechanical Room	B37, B38	No	--
15	White Seam Sealant on Fiberglass Pipe Insulation	Yes	Lower Level Mechanical Room	B39, B40	No	--
16	White Sink Undercoating	No	Lower Level Meeting Room	B41, B42	No	--
17	Beige 12"x12" Vinyl Floor Tile with Streaks and associated Black Mastic	No	Lower Level Elevator Machine Room	B43, B44	Yes Mastic Only 3-4% Chrysotile	75 s.f.
18	White 2'x2' Textured Ceiling Tile	Yes	Lower Level Office	B45, B46	No	--
19	Black Seam Sealant on Silver Foil Fiberglass Pipe Insulation	Yes	Lower Level Corridor and Meeting Room	B47, B48	Yes 4-5% Chrysotile	450 l.f.
20	White 2'x4' Ceiling Tile with Fissures and Endpoints	Yes	Lower Level Meeting Room and 1 st Floor Staff Kitchen	B49, B50	No	--
22	White 1'x1' Ceiling Tile	Yes	1 st Floor	B56, B57	No	--
23	Pink/Beige 12"x12" Vinyl Floor Tile and associated Black Mastic	No	1st Floor – Staff Kitchen	B58, B59	Yes Mastic Only 3-4% Chrysotile	150 s.f.

HA#	Description of Material	Friable (Yes/No)	Location	Sample Numbers	ACM ^a (Yes/No)	Approx. Quantity
24	Black Granite Pattern 12"x12" Vinyl Floor Tile and Grey/Green Leveling Compound	No	Lower Level Storage Room	B60, B61	No	--
25	Grey Door Caulking	No	Exterior of Front/Rear Entrance Doors	B62, B63	Yes 5-6% Chrysotile	100 l.f.
^a ACM: A Homogenous Material (HA) is considered asbestos containing if any one sample is found to contain greater than one percent asbestos. s. f. = Square Feet; l.f. = Linear Feet; and, ea = Each						

3.0 LEAD BASED PAINT INSPECTION

Apex performed an X-ray fluorescence (XRF) lead-based paint (LBP) inspection of the Chevy Chase Library in Chevy Chase, Maryland. The purpose of the inspection was to determine if LBP is present on the building components located within the interior or exterior, which may be directly affected during renovation activities.

The representative XRF LBP inspection was performed by a State of Maryland accredited lead inspector Mr. Robert Rock on October 12, 2018. Lead concentrations were analyzed at ninety-eight (98) sample points including calibrations. Apex tested accessible interior and exterior building components suspected of containing LBP for concentrations of lead, which may subsequently be disturbed during construction activities. Certain rooms/areas of the building, similar in design and construction history, were included within the representative LBP inspection.

The current definition of LBP established by the State of Maryland is greater than 0.7 milligrams of lead per square centimeter of surface area ($> 0.7 \text{ mg/cm}^2$) using a portable XRF analyzer. Results of the lead inspection concluded that the following building materials tested are classified as LBP ($\geq 0.7 \text{ mg/cm}^2$);

- Red painted metal hand rail in the lower level mechanical room; and,
- Beige ceramic wall tile in the lower level corridor.

The XRF LBP inspection was performed utilizing a XRF spectrum analyzer to determine the presence of suspect lead-painted components. XRF technology is well known for accuracy in detecting lead within individual layers of paint. By emitting radiation through each paint layer, Apex was able to determine the presence of lead within tested components. Building components typically known for posing potential lead exposure were tested during the inspection. All XRF test results are found in **Table 2**.

The lead paint testing is intended to provide data to employers, as required by OSHA, so that measures may be taken to prevent lead exposures to workers during renovation and/or demolition activities. This inspection does not include risk assessment of lead hazard. There is no requirement for paint coatings to be removed prior to demolition. However, if painted surfaces identified in this report that are lead containing will be disturbed (i.e., drilling, sanding, burning, non-intact component removal, etc.) during demolition and/or renovation in order to achieve the project requirements, precautions shall be taken in accordance with the OSHA Lead in Construction Standard (29 CFR 1926.62) and State of Maryland regulations.

It is important to note that even low concentrations of lead in paint (i.e., less than 0.7 mg/cm^2) that do not meet the State of Maryland's definition for LBP, have the potential to result in some lead exposure to

building occupants and/or workers, particularly construction workers involved with activities such as torch cutting and welding metal structures, abrasive blasting, or sanding painted surfaces. Work practices involving the disturbance of such lead-containing paints or other materials are regulated under the U.S. Occupational Safety and Health Administration's (OSHA's) *Lead in Construction Standard* in Title 29 of the CFR Part 1926.62. As a result, all construction and demolition activities involving lead-containing materials (regardless of the lead content) must comply with the OSHA standard, which prescribes requirements for contractor/worker exposure assessment, worker protection, and engineering controls.

The disposal of waste generated during any restoration, renovation, or demolition operations, including items coated with lead paint, is regulated by EPA Standard 40 CFR 261, Subpart C. This regulation requires that a Toxicity Characteristic Leaching Procedure (TCLP) test be utilized to determine if the construction debris is considered hazardous waste. A material is considered hazardous if it is ignitable, reactive, corrosive, or toxic.

Table 2
Lead XRF Reading Results
Chevy Chase Library
8500 Connecticut Avenue
Chevy Chase, Maryland

Reading No	Component	Substrate	Side	Condition	Color	Floor	Room	Results	PbC
1	Calibrate	-	-	-	-	-	-	Negative	0
2	Calibrate	-	-	-	-	-	-	Positive	3.3
3	Calibrate	-	-	-	-	-	-	Negative	0.27
4	Window Sill	Metal	C	Cracked	White	1st Floor	Exterior	Negative	0.06
5	Window Sash	Wood	B	Cracked	White	1st Floor	Exterior	Negative	0.08
6	Window Sash	Wood	B	Cracked	White	1st Floor	Exterior	Negative	0.7
7	Window Sash	Wood	C	Cracked	White	1st Floor	Exterior	Negative	0.07
8	Door	Metal	C	Intact	Red	1st Floor	Exterior	Negative	0
9	Hand Rail	Metal	C	Intact	Black	1st Floor	Exterior	Negative	0
10	Door	Wood	A	Intact	White	1st Floor	Children's	Negative	0
11	Door Frame	Metal	A	Intact	White	1st Floor	Children's	Negative	0
12	Wall	Drywall	A	Intact	White	1st Floor	Children's	Negative	0.02
13	Wall	Drywall	D	Intact	Yellow	1st Floor	Children's	Negative	0
14	Window Sill	Wood	D	Intact	White	1st Floor	Children's	Negative	0.01
15	Window Sash	Wood	D	Intact	White	1st Floor	Children's	Negative	0.13
16	Window Sash	Metal	B	Intact	White	1st Floor	Children's	Negative	0
17	Window Sash	Wood	B	Intact	White	1st Floor	Adult Reading	Negative	0.3
18	Window Sill	Wood	B	Intact	White	1st Floor	Adult Reading	Negative	0.13
19	Window Casing	Wood	B	Intact	White	1st Floor	Adult Reading	Negative	0.16
20	Window Casing	Wood	B	Intact	White	1st Floor	Adult Reading	Negative	0.07
21	Window Sill	Wood	B	Intact	White	1st Floor	Adult Reading	Negative	0
22	Window Sash	Wood	B	Intact	White	1st Floor	Adult Reading	Negative	0.4
23	Window Sash	Metal	D	Intact	White	1st Floor	Adult Reading	Negative	0.05
24	Wall	Drywall	A	Intact	White	1st Floor	Adult Reading	Negative	0.06
25	Wall	Drywall	C	Intact	White	1st Floor	Adult Reading	Negative	0.06
26	Wall	Drywall	C	Intact	White	1st Floor	Adult Collection	Negative	0
27	Wall	Drywall	B	Intact	White	1st Floor	Adult Collection	Negative	0.06
28	Door	Metal	C	Intact	White	1st Floor	Adult Collection	Negative	0
29	Door Frame	Metal	C	Intact	White	1st Floor	Adult Collection	Negative	0.03
30	Window Sill	Metal	C	Intact	White	1st Floor	Adult Collection	Negative	0.13
31	Window Sash	Metal	C	Intact	White	1st Floor	Adult Collection	Negative	0.4
32	Window Casing	Metal	C	Intact	White	1st Floor	Adult Collection	Negative	0.12
33	Wall	Drywall	A	Intact	White	1st Floor	Lobby	Negative	0
34	Wall	Drywall	C	Intact	White	1st Floor	Lobby	Negative	0.01

Reading No	Component	Substrate	Side	Condition	Color	Floor	Room	Results	PbC
35	Wall	Drywall	C	Intact	White	1st Floor	Staff Area	Negative	0
36	Wall	Drywall	D	Intact	White	1st Floor	Staff Area	Negative	0
37	Wall	Drywall	B	Intact	Yellow	1st Floor	Staff Area	Negative	0
38	Door	Wood	D	Intact	White	1st Floor	Staff Area	Negative	0
39	Door Frame	Wood	D	Intact	White	1st Floor	Staff Area	Negative	0.1
40	Door Frame	Metal	C	Intact	White	1st Floor	Staff Area	Negative	0
41	Door	Wood	C	Intact	White	1st Floor	Staff Area	Negative	0
42	Door	Wood	D	Intact	White	1st Floor	Kitchen	Negative	0.01
43	Door Frame	Metal	D	Intact	White	1st Floor	Kitchen	Negative	0.03
44	Window Sill	Wood	B	Intact	White	1st Floor	Kitchen	Negative	0.18
45	Window Sash	Wood	B	Intact	White	1st Floor	Kitchen	Negative	0.5
46	Window Casing	Wood	B	Intact	White	1st Floor	Kitchen	Negative	0.21
47	Wall	Drywall	B	Intact	White	1st Floor	Kitchen	Negative	0.06
48	Wall	Drywall	C	Intact	White	1st Floor	Kitchen	Negative	0.1
49	Wall	Drywall	B	Intact	White	1st Floor	Stairwell	Negative	0
50	Wall	Drywall	C	Intact	White	1st Floor	Stairwell	Negative	0
51	Door	Wood	C	Intact	White	1st Floor	Stairwell	Negative	0
52	Door Frame	Metal	C	Intact	White	1st Floor	Stairwell	Negative	0
53	Hand Rail	Metal	C	Intact	White	1st Floor	Stairwell	Negative	0
54	Hand Rail	Metal	C	Intact	White	1st Floor	Stairwell	Negative	0
55	Wall	Concrete	A	Intact	White	Basement	Meeting Room	Negative	0
56	Wall	Concrete	C	Intact	White	Basement	Meeting Room	Negative	0
57	Baseboard	Wood	B	Intact	White	Basement	Meeting Room	Negative	0
58	Baseboard	Wood	D	Intact	White	Basement	Meeting Room	Negative	0
59	Door	Wood	B	Intact	White	Basement	Meeting Room	Negative	0.25
60	Door	Wood	B	Intact	White	Basement	Meeting Room	Negative	0.29
61	Door Frame	Wood	B	Intact	White	Basement	Meeting Room	Negative	0.19
62	Window Sill	Wood	B	Intact	White	Basement	Meeting Room	Negative	0.1
63	Window Sash	Wood	B	Intact	White	Basement	Meeting Room	Negative	0.3
64	Window Casing	Wood	B	Intact	White	Basement	Meeting Room	Negative	0.29
65	Door	Wood	A	Intact	White	Basement	Old CCHS	Negative	0.03
66	Door Frame	Metal	A	Intact	White	Basement	Old CCHS	Negative	0.01
67	Wall	Drywall	B	Intact	White	Basement	Old CCHS	Negative	0
68	Wall	Drywall	D	Intact	White	Basement	Old CCHS	Negative	0
69	Chair Rail	Wood	B	Intact	White	Basement	Old CCHS	Negative	0
70	Chair Rail	Wood	A	Intact	White	Basement	Old CCHS	Negative	0
71	Chair Rail	Wood	A	Intact	White	Basement	Storage	Negative	0
72	Wall	Drywall	C	Intact	White	Basement	Storage	Negative	0
73	Wall	Drywall	D	Intact	White	Basement	Storage	Negative	0

Reading No	Component	Substrate	Side	Condition	Color	Floor	Room	Results	PbC
74	Ceiling	Drywall	-	Intact	White	Basement	Storage	Negative	0
75	Door	Wood	A	Intact	White	Basement	Storage	Negative	0
76	Door Frame	Metal	A	Intact	White	Basement	Storage	Negative	0
77	Door Frame	Metal	A	Intact	White	Basement	Electrical	Negative	0
78	Door	Wood	A	Intact	White	Basement	Electrical	Negative	0
79	Wall	Drywall	B	Intact	White	Basement	Electrical	Negative	0
80	Wall	Concrete	A	Intact	White	Basement	Electrical	Negative	0
81	Door	Metal	B	Intact	White	Basement	Boiler	Negative	0.06
82	Door Frame	Metal	B	Intact	White	Basement	Boiler	Negative	0.02
83	Wall	Concrete	B	Intact	White	Basement	Boiler	Negative	0
84	Wall	Concrete	D	Intact	White	Basement	Boiler	Negative	0
85	Floor	Concrete	-	Cracked	Red	Basement	Boiler	Negative	0
86	Floor	Concrete	-	Cracked	Red	Basement	Boiler	Negative	0.01
87	Riser	Concrete	-	Intact	Red	Basement	Boiler	Negative	0
88	Tread	Concrete	-	Intact	Red	Basement	Boiler	Negative	0
89	Hand Rail	Metal	-	Intact	Red	Basement	Boiler	Positive	3.2
90	Hand Rail	Metal	-	Intact	Red	Basement	Boiler	Positive	5.6
91	Wall	Plaster	A	Intact	Beige	Basement	Hall	Negative	0
92	Wall	Plaster	C	Intact	Beige	Basement	Hall	Negative	0.03
93	Wall	Ceramic Tile	C	Intact	Beige	Basement	Hall	Positive	4.5
94	Wall	Ceramic Tile	C	Intact	White	Basement	Bathroom	Negative	0.02
95	Wall	Ceramic Tile	C	Intact	Grey	Basement	Bathroom	Negative	0
96	Calibrate	-	-	-	-	-	-	Negative	0
97	Calibrate	-	-	-	-	-	-	Positive	3.3
98	Calibrate	-	-	-	-	-	-	Negative	0.3

4.0 OTHER HAZARDOUS BUILDING MATERIALS

Apex inspected for other potential hazardous building materials within the subject property. The purpose of the inspection was to determine if other hazardous building materials such as mercury-containing lighting tubes, thermostats and gauges, PCB light ballasts and transformers, etc. are present within the subject property, which may be directly affected by the course of renovation activities.

Polychlorinated Biphenyls (PCBs)

Apex's scope of work included inspecting representative light ballasts for labels indicating whether they contain polychlorinated biphenyls. Of the ballasts inspected, Apex did not observe any light ballast that did not have a manufacturer label stating "No PCBs". Light ballasts that are not labeled "No PCBs" identified on site should be assumed to contain PCBs and disposed of in accordance with the regulations outlined in Volume 40 Code of Federal Regulations (CFR) Part 761.

Furthermore, Apex did not observe any expansion joint compound or exterior caulking that potentially contains PCBs.

Mercury Hazards

Apex inspected fluorescent light tubes, wall-mounted thermostats, and mechanical gauges within the building as these materials often contain a small amount of mercury that is regulated under the EPA's Resource Conservation and Recovery Act (RCRA) program. Apex inspected representative lamps, thermostats, and gauges to evaluate potential mercury content and inventoried those that may contain mercury. The results of inspection are contained in **Table 3**.

Apex identified fluorescent lamps throughout the inspected areas of the subject building that are suspected to contain mercury. Approximately five hundred and thirty (530) 4-foot fluorescent bulbs were identified.

Mercury-containing lamps in the State of Maryland are subject to the EPA RCRA program. The Maryland Environmental Department strongly encourages generators to manage all mercury containing lamps under the provisions of the universal waste rule and have them properly recycled. Apex recommends that the mercury-containing components identified be recycled.

Table 3
PCB & Mercury Inspection Review
Chevy Chase Library
8500 Connecticut Avenue
Chevy Chase, Maryland

Location	Number of PCB Ballasts	Number of Mercury Tubes and Bulbs
Throughout Building	0	530 Four Foot FLTs

Mold Inspection

Apex also performed an inspection for suspect microbial growth and water damage throughout the subject property. Apex observed approximately 150 linear feet of mold impacted fiberglass pipe insulation located in the crawlspace on the lower level.

5.0 RECOMMENDATIONS

Asbestos

Materials suspected of potentially containing asbestos were identified during the inspection and sampled for asbestos content. Since ACM is present at the site, actions should be taken to prevent fiber release and to minimize exposure of the demolition contractor and other subcontractors to asbestos fibers. The following are Apex's recommendations for management of these ACM;

- The renovation/demolition contractor and other subcontractors working within these areas of the building should be made aware of the locations of the ACM and the possibility of concealed suspect ACM that could be found during renovation activities. They should be advised to not disturb the identified ACM or suspect ACM.
- Any concealed building materials discovered during renovation/demolition activities, which are suspected to contain asbestos, should be sampled by a licensed asbestos inspector and analyzed by an NVLAP-accredited laboratory to confirm the absence or presence of asbestos prior to disturbing such materials. If the materials are found to contain asbestos, applicable local, state and federal regulations will apply.

The following recommendations should be followed for demolition/renovation projects including contracting the services of an environmental consultant to monitor/document that the abatement contractor activities comply with applicable local, state and federal requirements.

Using this report as a guide,

- The prospective abatement contractor(s) should independently verify quantities of ACM present and unique site conditions to prepare a cost estimate and for notification purposes. Notification to the proper agency should be submitted prior to commencing any abatement activities.
- A licensed asbestos abatement contractor must remove any regulated ACM (RACM) within the State of Maryland. A RACM can be defined as friable asbestos-containing material, Category I that has become friable or has been subjected to sanding, grinding, cutting, or abrading and Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material during demolition or renovation operations. Removal of friable surfacing and thermal system insulation is considered Class I work. Class II work typically includes the removal of non-friable Category I and Category II ACM. Class I and Class II work defined by OSHA within

the State of Maryland must be removed by properly trained and licensed asbestos abatement supervisors and workers. Abatement activities must be performed in compliance with applicable local, state, and federal requirements.

- A ten (10)-day working day notification to the Maryland Department of the Environment is required on NESHAP sized (greater than or equal to 160 square feet, 240 linear feet, or 35 cubic feet) asbestos abatement projects. Additionally, three (3) days prior to the beginning of any abatement activities, post warning signs on the entrances/exits of the building.

Lead

It is important to note that even low concentrations of LBP (i.e., less than 0.7 mg/cm²) that fall below the criteria for LBP, have the potential to result in some lead exposure to workers, particularly construction workers involved with activities such as torch cutting and welding metal structures, abrasive blasting, or sanding painted surfaces. Although low lead concentrations in certain materials may not meet the State of Maryland definition of LBP, work practices involving the disturbance of such lead-containing paints or other materials are covered under the U.S. Occupational Safety and Health Administration's *Lead in Construction Standard* in Title 29 of the CFR Part 1926.62. As a result, all construction and demolition activities involving lead-containing materials (regardless of the lead content) must comply with this standard, which prescribes requirements for contractor/worker exposure assessment, worker protection, and engineering controls.

The disposal of waste generated during any restoration, renovation, or demolition operations, including items coated with lead paint, is regulated by EPA Standard 40 CFR 261, Subpart C. This regulation requires that a Toxicity Characteristic Leaching Procedure (TCLP) test be utilized to determine if the construction debris is considered hazardous waste. A material is considered hazardous if it is ignitable, reactive, corrosive, or toxic.

Mercury

Fluorescent lamps and thermostats were identified to be suspect in containing mercury. Apex recommends that these materials be packed into a steel drum prior to renovation or demolition and disposed of at an approved recycler/disposal facility.

Mold

Suspect mold growth observed on fiberglass pipe insulation in the lower level crawl space should be removed and discarded by properly trained mold remediation workers.

6.0 LIMITATIONS

Every reasonable attempt was made to locate ACM, LBP and other hazardous building materials. However, areas that are inaccessible can only be addressed through extrapolation of conditions in accessible building space and review of building plans, specifications, or other building documents provided to Apex.

Although every attempt was made to identify suspect ACM, LBP and other hazardous building materials in the inspected areas, it should be noted that it is possible for additional not identified or tested ACM, LBP, PCB ballasts and other hazardous building materials could be within concealed areas of the locations included in this report. Future construction activities could expose additional suspect building components. If suspect, ACM, LBP and other hazardous building materials are identified, Apex recommends they be assessed and analyzed.

Changes in the condition of the site may occur with time due to either natural processes or human activities. The findings presented in this report are based on site conditions existing at the time of the inspection. Apex cannot be responsible for any errors or omissions in this assessment resulting from incomplete or inaccurate disclosures.

7.0 REPORT RELIANCE AND USE

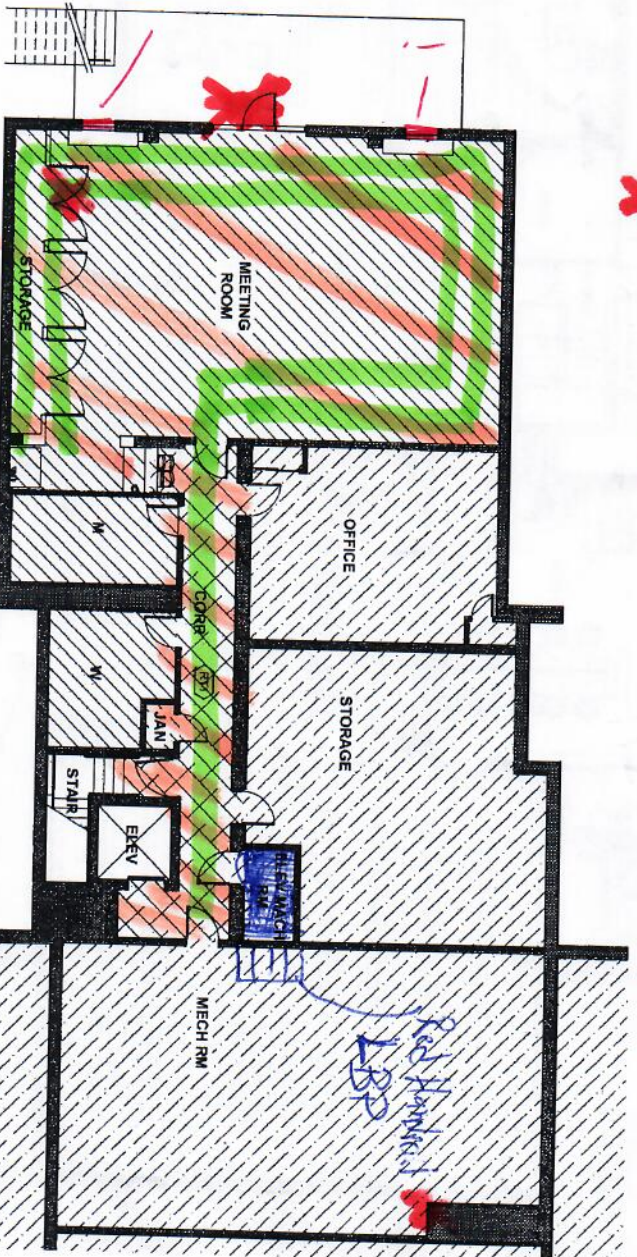
This report documents the findings of the services performed by Apex in accordance with our contractual agreement with Montgomery County Department of General Services (MCDGS). The findings, opinions, and conclusions of this report are for the exclusive use of MCDGS. This report shall not be provided to any other person, entity, or public or governmental agency (unless otherwise mandated by law) without MCDGS's written consent. Reliance on this report for any use or by parties other than specifically stated herein is prohibited without the expressed written consent of both Apex, and MCDGS. This document is not intended for any purposes other than those expressly set forth herein or as described in Apex's proposal or for use by parties other than for whom it has been prepared.

APPENDIX A

Site Drawing

3 LOWER LEVEL REFLECTED CEILING PLAN

1/8"=1'-0"



4 LOWER LEVEL FINISH PLAN

1/8"=1'-0"

EXISTING FLOORING TO REMAIN
SEE SHEET 1001 FOR FINISH MATERIALS SCHEDULE



LEGEND

- EXISTING WALL TO REMAIN
- EXISTING WALL OR ANY CONSTRUCTION TO BE DEMOLISHED
- EXISTING CONDITIONS DEPICTED ARE NOT INTENDED TO BE CONSIDERED AS AS-BUILT, AND ARE APPROXIMATE IN SCALE
- NO NEW WORK IS PROPOSED IN THESE AREAS OTHER THAN CORRECTIONS AND RELATED WORK AS-YET FOR THE NEW



APPENDIX B

Asbestos Bulk Sampling Laboratory Results/Chain of Custody



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order: 041831690

Customer ID: APEX52

Customer PO:

Project ID:

Attention: Chris Weaver

Apex Companies, LLC

15850 Crabbs Branch Way

Suite 200

Rockville, MD 20855

Project: Chevy Chase Library / MCDGS-117-01

Phone: (301) 300-1601

Fax: (301) 975-0169

Received Date: 10/22/2018 9:10 AM

Analysis Date: 10/24/2018 - 10/25/2018

Collected Date:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos % Type
			% Fibrous	% Non-Fibrous	
B-1 041831690-0001	East Exterior Windows - Beige Exterior Window Caulking	Beige Non-Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
B-2 041831690-0002	North Exterior Windows - Beige Exterior Window Caulking	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-3 041831690-0003	East Exterior Windows - White Exterior Window Glazing	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-4 041831690-0004	North Exterior Windows - White Exterior Window Glazing	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-5 041831690-0005	1st Fl-Adult Catalgo Room - East Wall - Yellow Carpet Mastic	Black/Yellow Non-Fibrous Heterogeneous		98% Non-fibrous (Other)	2% Chrysotile
B-6 041831690-0006	1st Floor - Quiet Study Room - Yellow Carpet Mastic	Black/Yellow Non-Fibrous Heterogeneous		98% Non-fibrous (Other)	2% Chrysotile
B-7-Yellow Mastic 041831690-0007 <i>Composite sample of black and yellow mastic.</i>	1st Floor - Childrens Room - Yellow Carpet Mastic	Black/Yellow Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
B-8 041831690-0008	1st Fl Entrance - Yellow Carpet Mastic on Concrete	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-9 041831690-0009	1st Fl Entrance - Yellow Carpet Mastic on Concrete	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-10 041831690-0010	1st Floor - Childrens Room - White Drywall	Gray Fibrous Homogeneous	10% Cellulose 5% Glass	85% Non-fibrous (Other)	None Detected
B-11 041831690-0011	1st Floor - Office 2 - White Drywall	Brown/Gray Fibrous Homogeneous	15% Cellulose 5% Glass	80% Non-fibrous (Other)	None Detected
B-12 041831690-0012	LL - Storage - White Drywall	Gray Fibrous Homogeneous	5% Cellulose 5% Glass	90% Non-fibrous (Other)	None Detected
B-13 041831690-0013	LL - Office - White Drywall	Brown/Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
B-14 041831690-0014	LL - Office - White Drywall	Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected

Initial report from: 10/24/2018 10:42:30



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EMSL Order: 041831690

Customer ID: APEX52

Customer PO:

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-15 041831690-0015	1st Floor - Children's Room - White Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-16 041831690-0016	1st Floor - Office 2 - White Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-17 041831690-0017	LL - Storage - White Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-18 041831690-0018	LL - Office - White Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-19 041831690-0019	1st Floor - Adult Catalog Room - Brown and Yellow Cove Base Mastic	Brown/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-20 041831690-0020	1st Floor - East Entrance - Brown and Yellow Cove Base Mastic	Brown/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-21-Floor Tile 041831690-0021	Lower Level Meeting Room - Red 12 x 12 Floor Tile	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-21-Mastic 041831690-0021A	Lower Level Meeting Room - Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-21-Leveling Compound 041831690-0021B	Lower Level Meeting Room - Leveling Compound over HA-9	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-22-Floor Tile 041831690-0022	Lower Level Meeting Room - Red 12 x 12 Floor Tile	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-22-Mastic 041831690-0022A	Lower Level Meeting Room - Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-22-Leveling Compound 041831690-0022B	Lower Level Meeting Room - Leveling Compound over HA-9	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-23-Floor Tile 041831690-0023	Lower Level Meeting Room - Gray Floor Tile	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-23-Mastic 1 041831690-0023A	Lower Level Meeting Room - Black Mastic under HA-09	Black Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
B-23-Mastic 2 041831690-0023B	Lower Level Meeting Room - Black Mastic under HA-09	Brown/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-24-Floor Tile 041831690-0024	Lower Level Meeting Room - Gray Floor Tile	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-24-Mastic 1 041831690-0024A	Lower Level Meeting Room - Black Mastic under HA-09	Black Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
B-24-Mastic 2 041831690-0024B	Lower Level Meeting Room - Black Mastic under HA-09	Brown/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-25-Floor Tile 041831690-0025	Lower Level Corridor - Gray Floor Tile	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-25-Mastic 041831690-0025A	Lower Level Corridor - Black Mastic under HA-09	Black Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
B-25-Mastic 2 041831690-0025B	Lower Level Corridor - Black Mastic under HA-09	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-26 041831690-0026	Main Stairs - Brown and Yellow Mastic under Rubber Stair Tread	Black/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-27 041831690-0027	Main Stairs - Brown and Yellow Mastic under Rubber Stair Tread	Black/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-28 041831690-0028	Lower Level Mechanical Room - White Rough Textured Ceiling Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-29 041831690-0029	Lower Level Mechanical Room - White Rough Textured Ceiling Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-30 041831690-0030	Lower Level Mechanical Room - White Rough Textured Ceiling Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-31 041831690-0031	Lower Level Mechanical Room - White Rough Textured Ceiling Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-32 041831690-0032	Lower Level Mechanical Room - White Rough Textured Ceiling Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-33 041831690-0033	Lower Level Mechanical Room - Red Seam Sealant on HAVC Duct	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-34 041831690-0034	Lower Level Mechanical Room - Red Seam Sealant on HAVC Duct	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-35 041831690-0035	Lower Level Mechanical Room - Green Seam Sealant on Metal Duct	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-36 041831690-0036	Lower Level Mechanical Room - Green Seam Sealant on Metal Duct	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-37 041831690-0037	Lower Level Mechanical Room - Brown Seam Sealant on Metal Duct	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-38 041831690-0038	Lower Level Mechanical Room - Brown Seam Sealant on Metal Duct	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-39 041831690-0039	Lower Level Mechanical Room - White Seam Sealant on Metal Duct	White Non-Fibrous Homogeneous	10% Glass 10% Wollastonite	80% Non-fibrous (Other)	None Detected
B-40 041831690-0040	Lower Level Mechanical Room - White Seam Sealant on Fiberglass	White Non-Fibrous Homogeneous	10% Glass 5% Wollastonite	85% Non-fibrous (Other)	None Detected
B-41 041831690-0041	Lower Level Meeting Room - White Sink Undercoating	Gray/White Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected
B-42 041831690-0042	Lower Level Meeting Room - White Sink Undercoating	Gray/White Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected
B-43-Floor Tile 041831690-0043	Lower Level Elevator Machine Room - Beige 12 x 12 with Streaks associated with Black Mastic	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-43-Mastic 041831690-0043A	Lower Level Elevator Machine Room - Beige 12 x 12 with Streaks associated with Black Mastic	Black/Yellow Non-Fibrous Heterogeneous		96% Non-fibrous (Other)	4% Chrysotile
B-44-Floor Tile 041831690-0044	Lower Level Elevator Machine Room - Beige 12 x 12 with Streaks associated with Black Mastic	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-44-Mastic 041831690-0044A	Lower Level Elevator Machine Room - Beige 12 x 12 with Streaks associated with Black Mastic	Black/Yellow Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
B-45 041831690-0045	Lower Level Office - White 2 x 2 Textured Ceiling Tiles	Gray/White Fibrous Homogeneous	40% Min. Wool 35% Glass	25% Non-fibrous (Other)	None Detected
B-46 041831690-0046	Lower Level Office - White 2 x 2 Textured Ceiling Tiles	Gray/White Fibrous Homogeneous	40% Min. Wool 40% Glass	20% Non-fibrous (Other)	None Detected
B-47 041831690-0047	Lower Level Corridor - Black Sealant of Silver Foil F/a Pipe	Black Non-Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
B-48 041831690-0048	Lower Level Meeting Room - Black Sealant of Silver Foil F/a Pipe	Black Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
B-49 041831690-0049	Lower Level Meeting Room - White 2 x 4 Ceiling Tiles with Striations and Small Pinholes	Gray/White Fibrous Homogeneous	30% Cellulose 20% Min. Wool 20% Glass	30% Non-fibrous (Other)	None Detected

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EMSL Order: 041831690

Customer ID: APEX52

Customer PO:

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-50 041831690-0050	1st Floor - Staff Kitchen - White 2 x 4 Ceiling Tiles with Striations and Small Pinholes	Gray/White Fibrous Homogeneous	25% Cellulose 25% Min. Wool 20% Glass	30% Non-fibrous (Other)	None Detected
B-51-Skim 041831690-0051	Lower Level Corridor - White Skim	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-51-Plaster 041831690-0051A	Lower Level Corridor - Brown Coat Plaster	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-52-Skim 041831690-0052	Lower Level Corridor - White Skim	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-52-Plaster 041831690-0052A	Lower Level Corridor - Brown Coat Plaster	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-53-Skim 041831690-0053	Lower Level Meeting Room - White Skim	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-53-Plaster 041831690-0053A	Lower Level Meeting Room - Brown Coat Plaster	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-54-Skim 041831690-0054	Lower Level Corridor - White Skim	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-54-Plaster 041831690-0054A	Lower Level Corridor - Brown Coat Plaster	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-55-Skim 041831690-0055	Lower Level Corridor - White Skim	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-55-Plaster 041831690-0055A	Lower Level Corridor - Brown Coat Plaster	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-56 041831690-0056	1st Floor - Circulation Desk - White 1 x 1 Ceiling Tile	Gray/White Fibrous Homogeneous	85% Min. Wool	15% Non-fibrous (Other)	None Detected
B-57 041831690-0057	1st Floor - Childrens Room - White 1 x 1 Ceiling Tile	Gray/White Fibrous Homogeneous	80% Min. Wool	20% Non-fibrous (Other)	None Detected
B-58-Floor Tile 041831690-0058	1st Floor - Staff Kitchen - Pinkish Beige 12 x 12 Floor Tile	Pink/Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-58-Mastic 041831690-0058A	1st Floor - Staff Kitchen - Black Mastic	Black/Yellow Non-Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
B-59-Floor Tile 041831690-0059	1st Floor - Staff Kitchen - Pinkish Beige 12 x 12 Floor Tile	Pink/Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-59-Mastic 041831690-0059A	1st Floor - Staff Kitchen - Black Mastic	Black/Yellow Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-60-Floor Tile 041831690-0060	Lower Level Storage Room - Black Granite Pattern 12 x 12 Floor Tile	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-60-Leveling Compound 041831690-0060A	Lower Level Storage Room - Green Leveling Compound	Gray/Green Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
B-61-Floor Tile 041831690-0061	Lower Level Storage Room - Black Granite Pattern 12 x 12 Floor Tile	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-61-Leveling Compound 041831690-0061A	Lower Level Storage Room - Green Leveling Compound	Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
B-62 041831690-0062	Exterior Front Entrance - Gray Exterior Door Caulking	Gray Non-Fibrous Homogeneous		94% Non-fibrous (Other)	6% Chrysotile
B-63 041831690-0063	Exterior Front Entrance - Gray Exterior Door Caulking	Gray Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile

Analyst(s)

Amy Latham (45)

Gregory Barry (6)

Nancy Stalter (33)

Benjamin Ellis, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial report from: 10/24/2018 10:42:30



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Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

041831690

EMSL Analytical, Inc.
10768 Baltimore Avenue

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Company: Apex Companies, LLC		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 15850 Crabbs Branchway, Suite 200		Third Party Billing requires written authorization from third party	
City: Rockville	State/Province: MD	Zip/Postal Code: 20855	Country: US
Report To (Name): Peter Braun & Chris Weaver		Telephone #: 3013001573	
Email Address: pbraun@apexcos.com Cweaver@apexcos.com		Purchase Order:	
Project Name/Number: Cherry Chase Library/MCD517-61		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail	
U.S. State Samples Taken: MD		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hour <input type="checkbox"/> 6 Hour <input type="checkbox"/> 24 Hour <input checked="" type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week			
*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.			
PLM - Bulk (reporting limit)		TEM - Bulk	
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%)		<input type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1	
<input type="checkbox"/> PLM EPA NOB (<1%)		<input type="checkbox"/> NY ELAP Method 198.4 (TEM)	
Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)		<input type="checkbox"/> Chatfield Protocol (semi-quantitative)	
Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)		<input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2	
<input type="checkbox"/> NIOSH 9002 (<1%)		<input type="checkbox"/> TEM Qualitative via Filtration Prep Technique	
<input type="checkbox"/> NY ELAP Method 198.1 (friable in NY)		<input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique	
<input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY)		Other	
<input type="checkbox"/> OSHA ID-191 Modified		<input type="checkbox"/>	
<input type="checkbox"/> Standard Addition Method			
<input type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group		Date Sampled:	
Samplers Name: Chris Weaver		Samplers Signature: Cweaver	
Sample #	HA #	Sample Location	Material Description
B-1	HA-01	East exterior windows	Beige exterior window caulking
B-2	↓	North exterior windows	↓
B3	HA-02	East exterior windows	White exterior window glazing
B4	↓	North exterior windows	↓
B5	HA-03	1 st FL-Adult catalog room-East wall	Yellow carpet mastic with residual
B6	↓	1 st FL- Quiet Study Room	black mastic
B7	↓	1 st FL- Childrens Room	↓
B8	HA-04	1 st FL- Entrance	Yellow carpet mastic on concrete
B9	↓	↓	↓
B10	HA-05	1 st FL- Childrens Room	White Drywall
Client Sample # (s):		Total # of Samples: 63	
Relinquished (Client):		Date: 10/19/18	Time:
Received (Lab):		Date: 10/22/18	Time: 9:10
Comments/Special Instructions:			

63

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAININGAsbestos Bulk Building Material
Chain of Custody

EMSL Order Number (Lab Use Only):

041831690

RECEIVED
EMSL
CINNAMARON, MD 20705
PHONE: (301) 937-5700
FAX: (301) 937-5701

18 OCT 22 AM 11:15

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
B11	HA-05	1 st FL - Office 2	White Drywall
B12	↓	LL - Storage	↓
B13	↓	LL - Office	↓
B14	↓	LL - Office	↓
B15	HA-06	1 st FL - Children's Room	White Joint Compound
B16	↓	1 st FL - Office 2	↓
B17	↓	LL - Storage	↓
B18	↓	LL - Office	↓
B19	HA-07	1 st FL - Adult Catalog Room	Brown and yellow cove base
B20	↓	1 st FL - East Entrance	mastic ↓
B21	HA-08	Lower level Meeting Room	Red 12X12 Floor tile with
B22	↓	↓	gray leveling compound over HA-9
B23	HA-09	Lower level Meeting Room	Gray Floor tile with black
B24	↓	↓	mastic under HA-09 ↓
B25	↓	Corridor	↓
B26	HA-10	Main Stairs	Brown and yellow mastic under
B27	↓	↓	gray rubber stair tread
B 28	HA-11	Lower Level Mechanical Room	White rough textured ceiling
B 29	↓	↓	plaster ↓
B 30	↓	↓	↓
B 31	↓	↓	↓
B 32	↓	↓	↓
B 33	HA-12	Lower Level Mechanical Room	Red Seam Sealant on metal
B34	↓	↓	HVAC Duct
*Comments/Special Instructions:			



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

041631696

EMSL Analytical, Inc.
10768 Baltimore Avenue

RECEIVED
C/ABE/MSL/MD 20705
PHONE: (301) 937-5700
FAX: (301) 937-5701

18 OCT 22 AM 11:15

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
B35	HA-13	Lower Level Mechanical Room	Green seam sealant on metal
B36	↓	↓	duct
B37	HA-14	↓	Brown seam sealant on metal
B38	↓	↓	duct
B39	HA-15	↓	White Seam sealant on fiberglass
B40	↓	↓	pipe
B41	HA-16	Lower level Meeting Room	White sink undercoating
B42	↓	↓	↓
B43	HA-17	Lower level elevator machine room	Beige 12X12 with white streaks
B44	↓	↓	associated with black mastic
B45	HA-18	Lower level Office	White 2X2 textured ceiling
B46	↓	↓	tiles
B47	HA-19	Lower level Corridor	Black sealant off silver foil
B48	↓	Lower level Meeting Room	F/a pipe ↓
B49	HA-20	↓	White 2X4 ceiling tile with
B50	↓	1 st FL - Staff Kitchen	streaks and small pin holes
B51	HA-21	Lower level Corridor	White skim and brown
B52	↓	↓	rough coat plaster
B53	↓	Lower level Meeting Room	↓
B54	↓	Lower level Corridor	↓
B55	↓	↓	↓
B56	HA-22	1 st FL - Circulation Desk	White 1X1 ceiling tile
B57	↓	1 st FL - Childrens Room	↓
B58	HA-23	1 st FL - Staff Kitchen	Pinkish beige 12X12 with black mastic
*Comments/Special Instructions:			



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

EMSL Order Number *(Lab Use Only)*:

04/83/690

RECEIVED
FBI
Cincinnati
Beltsville MD 20705
PHONE: (301) 937-5700
FAX: (301) 937-5701
18 OCT 22 AM 11:15
le information

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Page 4 of 4 pages

APPENDIX C

Photograph Documentation

Photograph 1
Description: View of front of building.



Photograph 2
Description: View of back of building



Photograph 3
Description: HA-01: Beige exterior window caulking.
ACM.
4% Chrysotile.



Photograph 4

Description: HA-02: White exterior window glazing.

Non-Detect for the presence of Asbestos.



Photograph 5

Description: HA-03: Yellow carpet mastic with residual black mastic.

ACM.

2-3% Chrysotile.



Photograph 6

Description: HA-04: Yellow carpet mastic.

Non-Detect for the presence of Asbestos.



Photograph 7

Description: HA-05 & 06: White drywall associated with white joint compound.

Non-Detect for the presence of Asbestos.



Photograph 8

Description: HA-07: Brown and yellow cove base mastic.

Non-Detect for the presence of Asbestos.



Photograph 9

Description: HA-08: Red 12x12 floor tile with grey level compound over HA-09.

Non-Detect for the presence of Asbestos.



Photograph 10

Description: HA-09: Grey floor tile
with black mastic
under HA-08.

ACM, Mastic Only

3% Chrysotile.



Photograph 11

Description: HA-10: Brown and
yellow mastic
under grey rubber
stair tread.

Non-Detect for
the presence of
Asbestos.



Photograph 12

Description: HA-11: White rough
textured ceiling plaster.

Non-Detect for the
presence of Asbestos.



Photograph 13
Description: Red seam sealant on metal HVAC duct.

Non-Detect for the presence of Asbestos.



Photograph 14
Description: HA-13: Green seam sealant on metal HVAC duct.

Non-Detect for the presence of Asbestos.



Photograph 15
Description: HA-14: Brown seam sealant on HVAC metal duct.

Non-Detect for the presence of Asbestos.



Photograph 16

Description: HA-15: White seam sealant on fiberglass pipe insulation.

Non-Detect for the presence of Asbestos.



Photograph 17

Description: HA-16: White sink undercoating.

Non-Detect for the presence of Asbestos.



Photograph 18

Description: HA-17: Beige 12x12 vinyl floor tile with streaks associated with black mastic.

ACM, Mastic Only.

3-4% Chrysotile.



Photograph 19
Description: HA-18: White 2x2 textured ceiling tile.

Non-Detect for the presence of Asbestos.



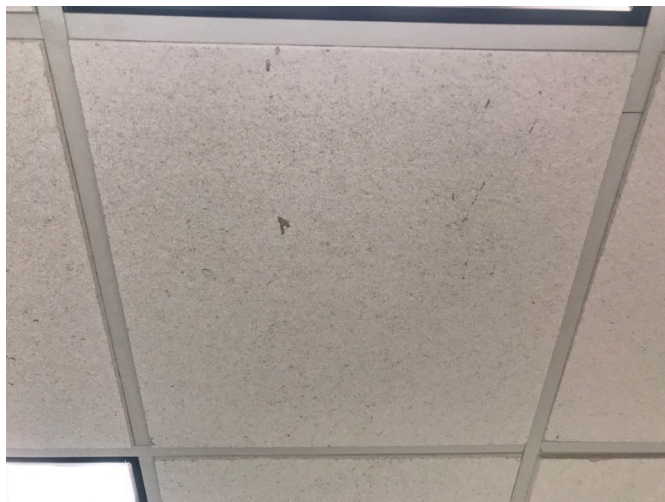
Photograph 20
Description: HA-19: Black seam sealant on silver foil fiberglass pipe.

ACM.
4-5% Chrysotile.



Photograph 21
Description: HA-20: White 2x4 ceiling tile with striations and small pinholes.

Non-Detect for the presence of Asbestos.



Photograph 22
Description: HA-21: White and brown coat plaster.

Non-Detect for the presence of Asbestos.



Photograph 23
Description: HA-22: White 1x1 ceiling tile.

Non-Detect for the presence of Asbestos.



Photograph 24
Description: HA-23: Pinkish beige 12x12 floor tile with white blotches and associated black mastic.

ACM, Mastic Only.
3-4 % Chrysotile.



Photograph 25
Description: HA-24: Black granite pattern 12x12 floor tile with green leveling compound.

Non-Detect for the presence of Asbestos.



Photograph 26
Description: HA-25: Grey exterior door caulking.

ACM.

5-6% Chrysotile.



Photograph 27
Description: M-01: Visible mold on fiberglass pipe insulation in mechanical room.





December 10, 2018

Mr. Mike Lowe, P.E.
Project Management Section
Division of Building Design and Construction
Department of General Services
101 Monroe Street, 11th Floor
Rockville, Maryland 20850

**Re.: Proposal for Asbestos Abatement
Chevy Chase Library
8005 Connecticut Avenue
Chevy Chase, Maryland 20815**

Apex Opportunity #: 040142

Dear Mr. Lowe:

Apex Companies, LLC (Apex) is pleased to provide the enclosed proposal to provide asbestos abatement services at Chevy Chase Library located at 8005 Connecticut Avenue in Chevy Chase, Maryland. Apex will serve as prime contractor on this project and will coordinate all aspects including abatement, industrial hygiene monitoring, notifications, and reporting.

The goal of the project is to conduct abatement (removal) of the identified asbestos containing materials within the building which is scheduled for renovations. Apex obtained bids included in **Appendix B** from three abatement contractors;

1. Retro Environmental, Inc Progress Environmental, LLC (Winning Bidder);
2. Bristol Environmental, Inc; and,
3. Progress Environmental, LLC; and,

SCOPE OF WORK:

Apex proposes to furnish labor, equipment, materials, and supervision to perform the following line items:

Item #1: Asbestos Removal: 15 Shifts to Complete

Material	Quantity
Beige window caulking on exterior of windows	15 windows
Yellow and black residual carpet mastic located throughout the 1 st Floor	8,500 square feet
Black mastic associated with grey floor tile located in the lower level meeting room and corridor	1,400 square feet
Black mastic associated with Beige 12"x12" floor tile in the lower level elevator machine room	75 square feet
Black seam sealant on fiberglass pipe insulation in the lower level corridor and meeting room	450 linear feet
Black mastic associated with Pink/Beige 12"x12" floor tile in the 1 st Floor staff kitchen	150 square feet
Grey door caulking on exterior of entry doors	100 linear feet

Since the project will involve removal of “regulated asbestos containing material” (RACM) in quantities that meet or exceed the National Emission Standards for Hazardous Air Pollutants (NESHAP)-size abatement project, the project will require notification to the Maryland Department of Environment (MDE) 10 business days prior to initiating abatement.

Although the identified ACM floor tile are Category 1 non-friable ACM per EPA NESHAPs, the State of Maryland requires contractors to set up a “regulated” work area for floor tile abatement projects that provides negative air pressure by air movers with high efficiency particulate air (HEPA) filtration as well as critical barriers and a decontamination unit.

Apex will provide full time industrial hygiene abatement project supervision to ensure and fully document that asbestos abatement operations occur in strict accordance with the appropriate regulatory authorities. Project supervision involves air sampling, on-going review of on-the-job work practices, and assessment of contamination and hazard control mechanisms. Apex will also manage and coordinate all aspects of the work.

It should be noted that the estimated cost for abatement accounts for one (1) mobilization. If during demolition additional ACM are discovered this will require additional mobilization fees by the abatement contractor.

CLARIFICATIONS AND QUALIFICATIONS:

1. All abatement work is anticipated to be scheduled during regular (8-hour) daytime weekday shifts. The project is anticipated to require 15 shifts to complete. Specific schedule and working hours will be determined. Every effort will be made to minimize the impact of work activities on neighboring properties.
2. Owner shall provide Apex with hot and cold water, 110V electricity, and use of sanitary facilities for the duration of the work. Apex and its subcontractor shall have free and unrestricted use of these utilities.
3. Owner shall provide adequate staging and storage areas adjacent to the work areas (i.e., truck access/parking).
4. All furnishings and other movable materials obstructing access to floor surfaces will be removed from the affected work areas by others prior to Apex's arrival on site.
5. All persons must be vacated from the immediate work areas during the abatement activities.
6. Only certified asbestos workers, Apex's and its subcontractor's employees, emergency personnel, and government inspectors will be allowed into the work area during abatement activities.
7. All heating, ventilating, and air conditioning (HVAC) in the work area shall be taken off-line (if required) by the owner, as necessary.
8. All ACM addressed in this proposal is readily accessible and does not require any demolition of building components to access and abate ACM.
9. A lock-down encapsulant will be applied to the work area after completion of removal, but prior to final air clearance.
10. Abatement of asbestos containing materials subject to the Code of Maryland Administrative Regulations (COMAR), Title 26, Chapter 11, must meet a final air clearance test as follows:
 - Occupied areas: less than 0.01 fibers per cubic centimeter (f/cc) as determined by Phase Contrast Microscopy (PCM) using the NIOSH 7400 Method. This analysis method is

typically performed on site by a trained microscopist and industrial hygienist (IH) who has successfully completed the NIOSH 582 equivalency course and participates in Apex's proficiency analyst testing (PAT) program as mandated by the American Industrial Hygiene Association (AIHA). The frequency of sampling depends on the size of the work area, but no less than two (2) final clearance samples will be collected and analyzed from the area where asbestos abatement occurs. Apex has not included any additional analytical costs beyond what is required by regulations.

11. Payment terms are net thirty (30) days. Apex considers the effective date for project completion to be when the abatement report and invoice has been issued for the project. Apex's final abatement report will include copies of the daily logs and checklists maintained throughout the project; and copies of all air monitoring results.
12. This proposal is firm for a period of sixty (60) days.

EXCLUSIONS:

This proposal does NOT include labor or material for the following:

- Demolition of any temporary partition walls, mechanical and electrical systems
- Additional mobilizations;
- Abatement and/or replacement of materials beyond the stated scope; and
- Any painting, finishing, or surface preparation.

During this project, Apex will provide any required notifications and perform necessary abatement inspections, sampling and analysis. All work will be performed in accordance with current federal and Maryland state regulations concerning asbestos removal. Apex will provide copies of all notices, and air monitoring results to the owner or agent as part of the final report within two (2) weeks of completion of the abatement project.

If the outlined terms are agreeable, please sign and return the enclosed Proposal/Contract for Services or issue a purchase order to indicate your acceptance. Receipt of the signed Proposal/Contract for Services **or executed purchase order** will constitute formal notice to proceed.

Apex appreciates the opportunity to be of service to Montgomery County in this matter. If you have any questions or comments, please call.

Sincerely,
Apex Companies, LLC



Christopher J. Weaver
Project Manager
Maryland Division

Enclosure



PROPOSAL/CONTRACT FOR SERVICES

To: Mr. Mike Lowe
Project Management Section
Division of Building Design and Construction
Division of Capital Development
101 Monroe Street, 11th Floor
Rockville, Maryland 20850

Date: December 10, 2018

Re: Asbestos Abatement Proposal
Chevy Chase Library
8005 Connecticut Avenue
Chevy Chase, Maryland

Page: 1 of 1

SERVICES TO BE PERFORMED:

Abatement of specified asbestos-containing materials (ACM) located within Chevy Chase Library at 8005 Connecticut Avenue located in Chevy Chase, Maryland will be performed by Retro Environmental. This abatement scope of work (SOW) is necessitated by the planned renovation to the specified building. All work will be performed in accordance with the attached technical proposal dated December 10, 2018.

Item #1: Asbestos Removal

- Asbestos Abatement Removal **Estimated Cost: \$45,972.00**
- Apex IH Monitoring, Management/Reporting **Estimated Cost: \$12,875.00**

Total Estimated Cost: \$58,847.00

Unit Rates:

- Cost for Additional Mudded Elbows/TSI: \$28.75/each
- Cost for Additional floor tile and mastic: \$4.03/square foot
- Cost for fire door removal (if required): \$86.25/door
- Cost for additional pipe seam sealant: \$5.18/linear foot
- Additional mobilization cost (if required): \$920/mobilization

(An executed purchase order referencing this proposal must be received by Apex prior to the commencement of work. A fax or e-mailed copy is acceptable followed by the original.)

SUBMITTED BY:

A handwritten signature in blue ink, appearing to read 'CJ Weaver'.

Authorized Signature

Name: Christopher J. Weaver

Title: Project Manager

Date: December 10, 2018

ACCEPTED FOR CLIENT BY:

Authorized Signature

Name: _____

Title: _____

Date: _____

This price quotation is valid for a period of 60 days from the date of this proposal. This proposal and all work done pursuant to the proposal is subject to the existing TERMS AND CONDITIONS between Apex and Montgomery County Government (Contract No. 1074795).



Appendix A

Bid Forms



BID FORM

**Asbestos Abatement
Chevy Chase Library
8005 Connecticut Avenue
Chevy Chase, Maryland**

By completing the following Bid Form, the Contractor affirms that they have familiarized themselves with the scope-of-work indicated below and will conduct all work in accordance with State of Maryland and Federal environmental/construction and health and safety regulations, laws, and other requirements.

The quantities of asbestos-containing materials (ACM) detailed below are quantities identified by Apex and are intended to provide the basis for bidding purposes. There will be allowance for change orders due to additional ACM discovered during demolition and additional bulk sampling to be performed by Apex.

The Contractor is responsible for obtaining, paying, and filing for all related notifications and permits associated with asbestos removal activities for this project.

Scope of Work:

The Contractor shall supply all labor, materials, services, insurances, permits, notices and equipment necessary to carry out the work in the allotted timeframe.

The intent of the project is to remove and dispose of hazardous materials prior to demolition as follows;

Pricing Items:

1. Asbestos Abatement:

**Table 1 – Identified ACM
Chevy Chase Library**

Material	Quantity
Beige window caulking on exterior of windows	15 windows
Yellow and black residual carpet mastic located throughout the 1 st Floor	8,500 square feet
Black mastic associated with grey floor tile located in the lower level meeting room and corridor	1,400 square feet
Black mastic associated with Beige 12"x12" floor tile in the lower level elevator machine room	75 square feet
Black seam sealant on fiberglass pipe insulation in the lower level corridor and meeting room	450 linear feet
Black mastic associated with Pink/Beige 12"x12" floor tile in the 1 st Floor staff kitchen	150 square feet
Grey door caulking on exterior of entry doors	100 linear feet

Demolition will be performed by the General Contractor and will include architectural, mechanical, electrical, plumbing systems within the building. **Table 1** presents the ACM identified by Apex to be removed from the Chevy Chase Library.

For the requested unit prices, unit price shall include all equipment, labor, materials, supervision, engineering, general conditions, burden, overhead and profit necessary to complete the work. Contractor will be required to provide appropriate calculations, waste tickets, manifests, etc to Apex.

Schedule:

The project start date is TBD.

Clarifications:

1. The project will be verbally awarded on TBD.
2. Project will be performed as described above.
3. Contractor's price will be held firm for 120 days.
4. Contractor will be required to submit the required 10 working day notification, post the required State of Maryland notification sign 3 days prior to beginning the project and obtain state of Maryland asbestos permit.
5. The awarded Contractor will have access to the building to meet the schedule.
6. Use of water and electrical hook up will be made available.
7. Kickoff Meetings: Contractor and Apex will meet with MCDGS prior to the commencement of abatement to discuss the scope of work and schedule.
8. Contractor shall be responsible for performing daily OSHA air sampling if required.
9. Contractor will deliver waste manifest(s) to Apex within 30 days upon receipt at the landfill.
10. Parking will be made available.
11. Engineering controls, work practices and personal protective equipment will meet the requirements for class I and II work in accordance with OSHA and RACM in accordance with EPA and state of Maryland regulations.
12. Owner will be responsible for removing movable objects, such as computers, photocopiers, printers, and personal items and mementos from the work area.
13. Contractor will have access to sanitary facilities if still on-line. Contractors must be prepared to provide and maintain their own sanitary facilities.
14. Contractor will be required to maintain the compliment of work force necessary to complete the project on schedule.
15. Standard of Care: Contractor is responsible for maintaining the work, staging, and parking areas free of debris, trash, wastes, etc. generated during the project. Contractor will be responsible for removing tape and spray glue adhesive residue.
16. Electrical: A temporary power stand on each floor outside the containment area will be provided for our use. These power stands will provide power, so that you can run extension cords into the abatement area for lighting and power. This will allow for control of the potential electrical hazard during abatement and eliminate the need to abate any temporary lighting equipment. NOTE: BE PREPARED TO PROVIDE TEMPORARY LIGHTING IN ALL YOUR WORK AREAS.

Criteria for Re-occupancy:

In accordance with the State of Maryland regulations concerning final air clearance, the final air clearance samples will be analyzed by Phase Contrast Microscopy (PCM) via the NIOSH 7400 Method. Apex reserves the right to collect final air clearance samples and have analyzed using the AHERA TEM protocol.

Abatement will be considered complete when the airborne fiber concentration level of the samples collected inside the NPE are less than 0.01 fibers per cubic centimeter (f/cc³) (average of less than 70 s/mm², if AHERA protocol is used).

The negative pressure enclosure will be re-cleaned, re-encapsulated and re-sampled until the criteria is met. The contractor will be responsible for any additional sampling costs associated with final air clearance.

Pricing:

The undersigned, having visited the job site, reviewed the project and received clarification on all items, proposes to furnish all labor, material, equipment, and services necessary for the proper completion of the Work required to complete the mentioned project.

PRICE #1: ASBESTOS ABATEMENT:TOTAL LUMP SUM COST: \$ 39,975.00NUMBERS OF SHIFTS TO COMPLETE WORK: 15DEFINE HOURS PER SHIFT (e.g., 8, 10, 12): 8**Line Item Costs:**

1. Unit Rate Cost for Mudded Elbows/TSI (if present): Unit Rate Cost: \$ 25.00
2. Unit Rate Cost for Additional Floor Tile and Mastic: Unit Rate Cost: \$ 3.50
3. Unit Rate Cost for Additional Pipe Seam Sealant: Unit Rate Cost: \$ 4.50
4. Unit Rate Cost for Fire Doors: Unit Rate Cost: \$ 75.00
5. Mobilization Cost for Additional removal if discovered: Mobilization Cost: \$ 1,200.00

Bidder's Name: RETRO ENVIRONMENTAL, INC.Legal Address: 5301 ENTERPRISE STREET, SYKESVILLE, MD 21784MICHAEL J. BROWER
Printed Name of Contractor's Agent
Contractor's Authorized Signature12-10-2018
Date

Pricing:

The undersigned, having visited the job site, reviewed the project and received clarification on all items, proposes to furnish all labor, material, equipment, and services necessary for the proper completion of the Work required to complete the mentioned project.

PRICE #1: ASBESTOS ABATEMENT:TOTAL LUMP SUM COST: \$ 44,600.00NUMBERS OF SHIFTS TO COMPLETE WORK: 15DEFINE HOURS PER SHIFT (e.g., 8, 10, 12): 8 HRS. DAY TIME**Line Item Costs:**1. Unit Rate Cost for Mudded Elbows/TSI (if present): Unit Rate Cost: \$ 50.00 EACH2. Unit Rate Cost for Additional Floor Tile and Mastic: Unit Rate Cost: \$ 6.00 pr. s.f.3. Unit Rate Cost for Additional Pipe Seam Sealant: Unit Rate Cost: \$ 18.00 L.F4. Unit Rate Cost for Fire Doors: Unit Rate Cost: \$ 500.00 reach5. Mobilization Cost for Additional removal if discovered: Mobilization Cost: \$2,500.00 per mob.Bidder's Name: Bristol Environmental, Inc.Legal Address: 9100 Yellow Brick Rd. Ste. D, Baltimore MD 21237Adam C. Knoppel
Printed Name of Contractor's Agent
Contractor's Authorized Signature12-7-18
Date

Pricing:

The undersigned, having visited the job site, reviewed the project and received clarification on all items, proposes to furnish all labor, material, equipment, and services necessary for the proper completion of the Work required to complete the mentioned project.

PRICE #1: ASBESTOS ABATEMENT:

TOTAL LUMP SUM COST: \$ 54,500.00
NUMBERS OF SHIFTS TO COMPLETE WORK: 20
DEFINE HOURS PER SHIFT (e.g., 8, 10, 12): 8

Line Item Costs:

1. Unit Rate Cost for Mudded Elbows/TSI (if present): Unit Rate Cost: \$ 25.00 LF
2. Unit Rate Cost for Additional Floor Tile and Mastic: Unit Rate Cost: \$ 5.00 sq FT
3. Unit Rate Cost for Additional Pipe Seam Sealant: Unit Rate Cost: \$ 8.00 LF
4. Unit Rate Cost for Fire Doors: Unit Rate Cost: \$ 50 EA
5. Mobilization Cost for Additional removal if discovered: Mobilization Cost: \$ 1,000.00

Bidder's Name: PROGRESS ENVIRONMENTAL

Legal Address: 401 Ritchie Rd Capital Heights MD

CHRIS DRUIN
Printed Name of Contractor's Agent

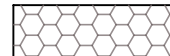
[Signature]
Contractor's Authorized Signature


12/10/18
Date


APPENDIX B
ACM DRAWING


HAZMAT LEGEND

- ⊠ B/1

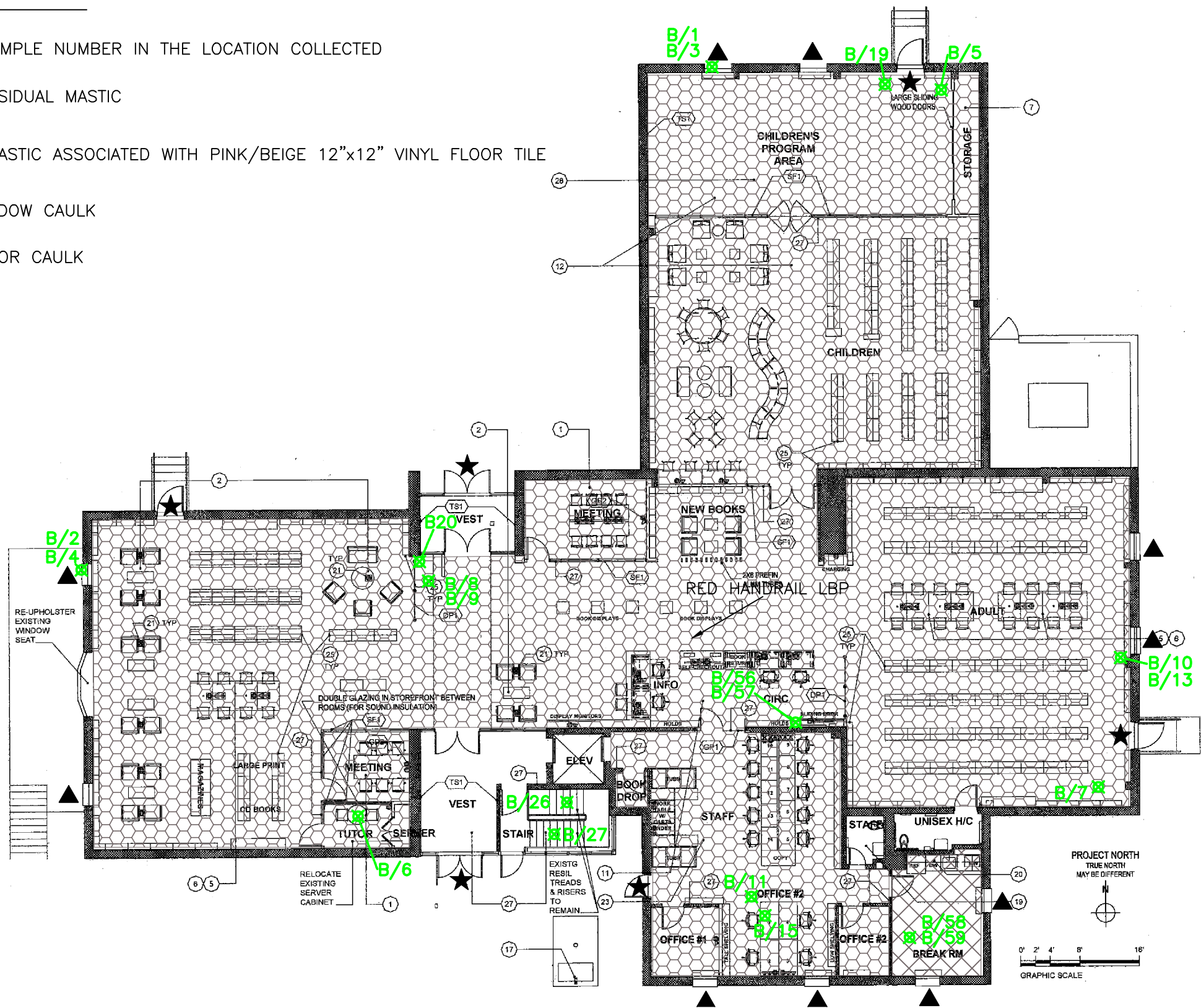
ASBESTOS BULK SAMPLE NUMBER IN THE LOCATION COLLECTED
- 

HA-3 – BLACK RESIDUAL MASTIC
- 

HA-23 – BLACK MASTIC ASSOCIATED WITH PINK/BEIGE 12”x12” VINYL FLOOR TILE
- 

HA-1 – BEIGE WINDOW CAULK
- 

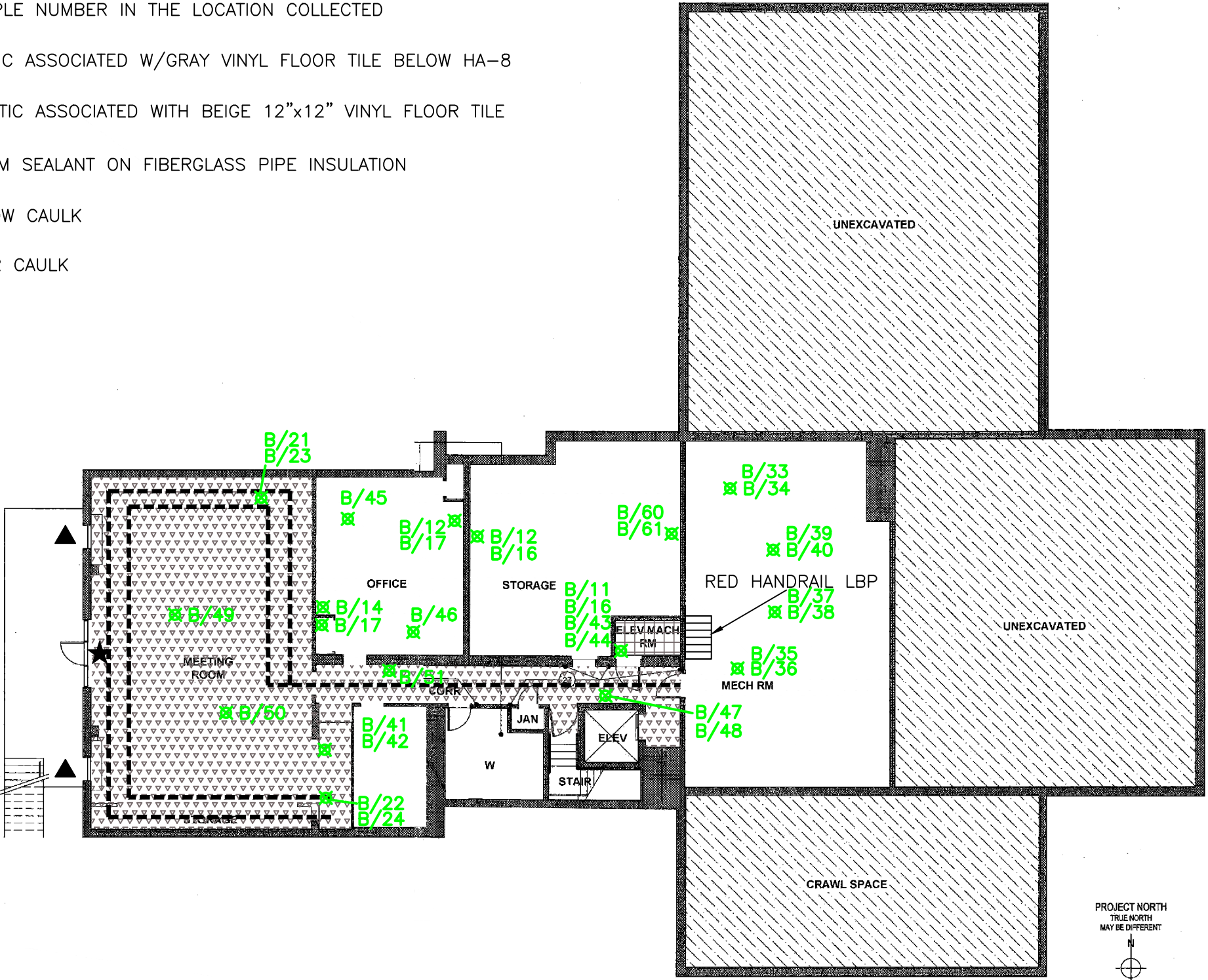
HA-25 – GRAY DOOR CAULK



HAZMAT LEGEND

- ⌘ B/1

ASBESTOS BULK SAMPLE NUMBER IN THE LOCATION COLLECTED
- HA-9 — BLACK MASTIC ASSOCIATED W/GRAY VINYL FLOOR TILE BELOW HA-8
- HA-17 — BLACK MASTIC ASSOCIATED WITH BEIGE 12"x12" VINYL FLOOR TILE
- HA-19 — BLACK SEAM SEALANT ON FIBERGLASS PIPE INSULATION
- HA-1 — BEIGE WINDOW CAULK
- HA-25 — GRAY DOOR CAULK



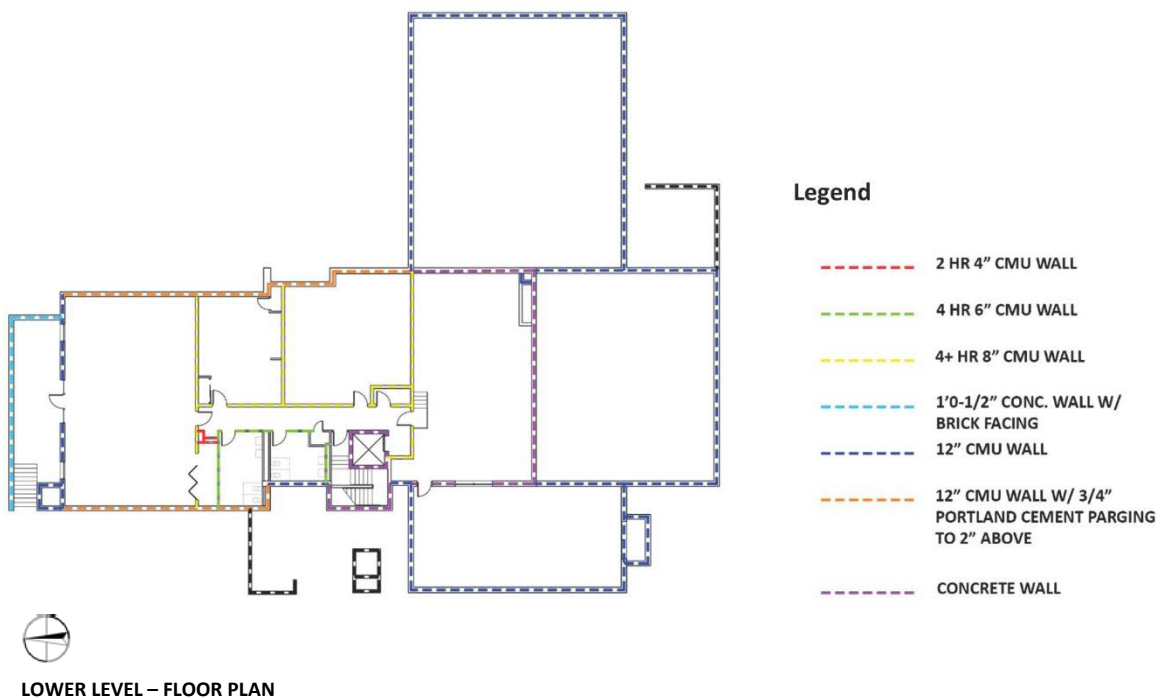
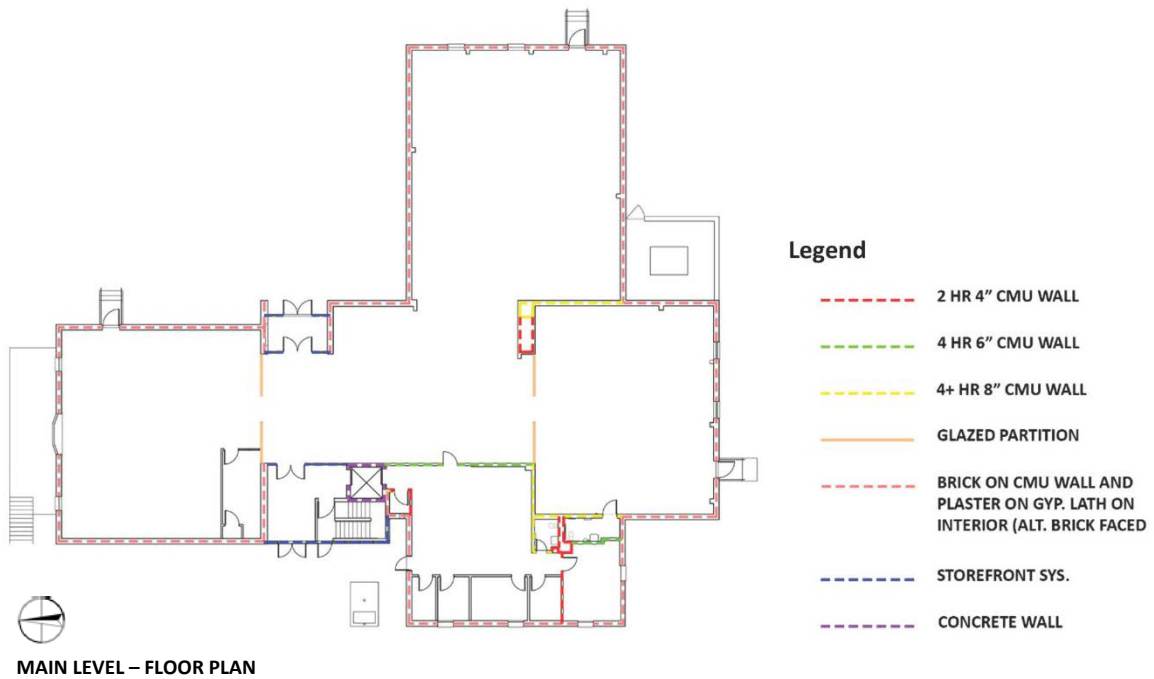
4 LOWER LEVEL FINISH PLAN 10
1/8"=1'-0"

J-Appendices:

Section-6

Existing Building: Fire Ratings of Partitions.

Fire Ratings of Existing Partitions





J-Appendices:

Section-7

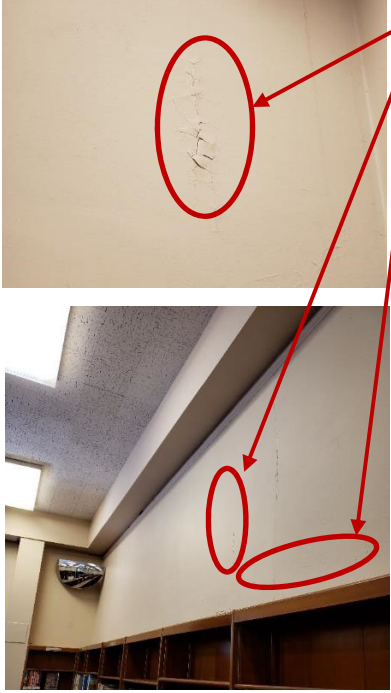

Architectural Systems: Image Tabulation

Appendix 7

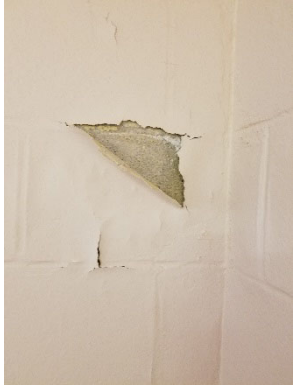


A. Architectural Systems: Image Tabulation

Picture #	Image	Description	Timeline		
			Immediate	Necessary	Extended
#7-A, A1.1 Roof		Condition of exposed painted wood in poor condition.	●		
Recommendation:	Isolated slate and sheet metal repairs to include edges and valleys, will likely be required to maintain the roof in serviceable condition. Scraping, priming, and painting all wood trim, and a contingency for replacing isolated rotted areas should be carried. Alternately, the Gale report recommends replacing the roof (slate tiles).				
#7-A, A1.2 Roof		Condition of exposed painted wood trim, fascia and rake are poor throughout the building exterior.	●		
Recommendation:	All rotten wood to be replaced and weathered paint to be restored to match existing.				




Chevy Chase Library - Facility Assessment

<p>#7-A, A1.3</p> <p>Roof</p> <p>Interior face of east wall of "Adults and Young Adults Room"</p>		<p>Signs of moisture damage.</p>	<p>●</p>		
<p>Recommendation:</p>	<p>Remove ceiling tiles at location of leakage and inspect the quality of all structural wood of the roofing frame. Investigate the source of leakage in the roof and mend peeling paint on the wall per architectural recommendations.</p>				
<p>#7-A, A1.4</p> <p>Roof</p> <p>Interior face of south wall of "Reference Room"</p>		<p>Damaged paint on duct</p>	<p>●</p>		
<p>Recommendation:</p>	<p>Investigate source of moisture near air conditioning piping system. Repair damaged duct and paint per architectural recommendations. Refer to cost</p>				

Chevy Chase Library - Facility Assessment

<p>#7-A, A2.1</p> <p>Foundation / Waterproofing</p>		<p>Moisture presence and peeling paint in Lower level, are likely caused by moisture penetrating the CMU walls due to the lack of an appropriate waterproofing membrane.</p>	<p>●</p>		
<p>Recommendation:</p>	<p>Re-grading the landscaped areas and providing provisions for drainage on the Northwest side will likely mitigate the moisture intrusion being experienced. Excavation and installation of a waterproofing membrane should be considered.</p>				
<p>#7-A, A2.2</p> <p>Foundation / Waterproofing</p> <p>West side of the building</p>		<p>Downspout not connected properly into the drain</p>	<p>●</p>		
<p>Recommendation:</p>	<p>Extend downspout properly into its designated drain.</p>				
<p>#7-A, A2.3</p> <p>Foundation / Waterproofing</p> <p>Northeast corner of the building</p>		<p>Settled profile of the grade around down spout drain.</p>	<p>●</p>		
<p>Recommendation:</p>	<p>All downspout drains to be checked for potential clogging during heavy rainfall only, and if clogged to be repaired accordingly.</p>				

Chevy Chase Library - Facility Assessment

<p>#7-A, A2.4</p> <p>Foundation / Waterproofing</p> <p>Mechanical and Equipment Room</p>		<p>Peeling paint at interior face of East basement wall.</p>	<p>●</p>		
<p>#7-A, A2.5</p> <p>Foundation / Waterproofing</p> <p>Mechanical and Equipment Room</p>		<p>Peeling paint at interior face of east basement wall.</p>	<p>●</p>		
<p>#7-A, A2.6</p> <p>Foundation / Waterproofing</p> <p>Mechanical and Equipment Room</p>		<p>Peeling paint at interior face of East basement wall.</p>	<p>●</p>		
<p>Recommendation:</p>	<p>Remove peeled paint from the existing concrete wall and prepare the surface per manufacturer's recommendation. Provide three coats of CrystalFlex 2K SuperStrong negative side basement waterproofing or equivalent product on the inside face of the concrete walls of the "Mechanical and Equipment Room" where water seepage was detected. Paint the final product with color matching the existing wall color considering the manufacturer's recommendations.</p>				

Chevy Chase Library - Facility Assessment

#7-A, A2.7

Foundation /
Waterproofing

Meeting Room



Peeling paint at interior face of northeast corner of basement wall.



#7-A, A2.8

Foundation /
Waterproofing

Meeting Room

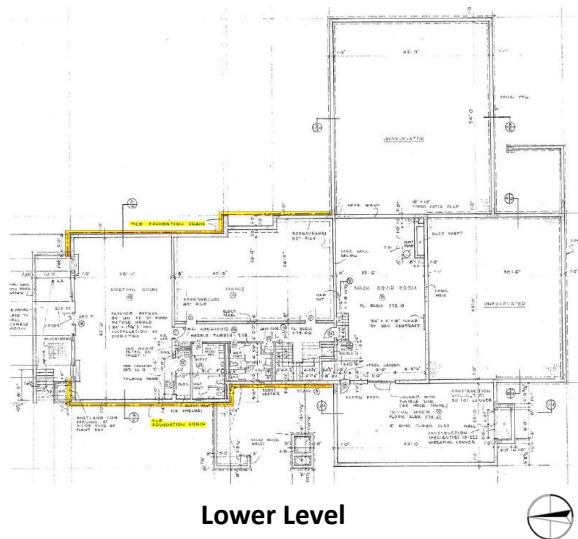


Peeling paint at interior face of west basement wall.



Recommendation:

Excavate the backfill against the basement walls along the east and west side of the building following the footprint of the existing foundation drainage system highlighted in Figure 1. Remove the existing damp-proofing (if necessary or if excess damage is observed) and provide new waterproofing membrane covered by protection board or rigid insulation. Also, provide a free-draining membrane over the waterproofing membrane. Gravel backfill may be used in place of draining membrane. Condition of the tile drain shown on existing drawings and highlighted in Figure 1. is to be evaluated upon excavation. It is anticipated that the tile foundation drain is clogged or moved such that its functionality is compromised on both the east and west walls of the basement level. If the tile foundation drain is found to be dysfunctional, it shall be removed and replaced with 4 inch perforated drainpipe below floor slab level. Also, remove the peeled paint from the interior face of the walls and repaint to match the existing wall color.

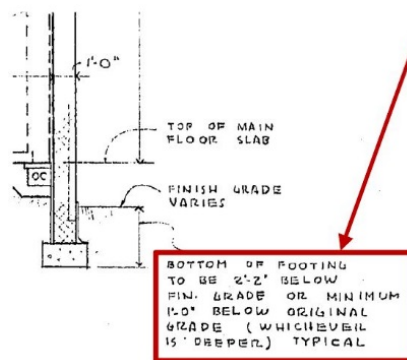


Chevy Chase Library - Facility Assessment

#7-A, A2.9

Foundation /
Waterproofing

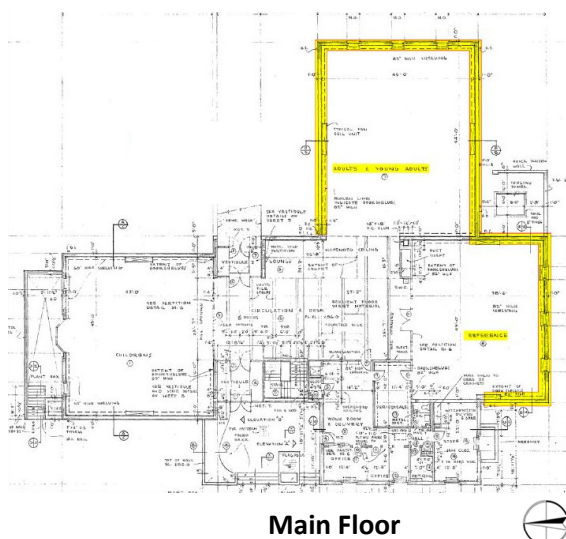
Frostline Depth



Existing design frostline depth.

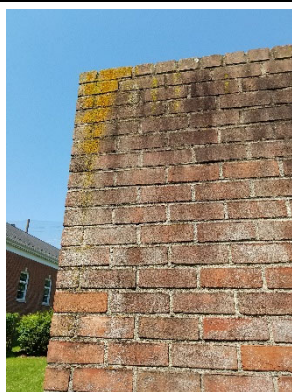
Recommendation:

Verify existing frostline depth by excavating one spot along each line of wall highlighted in Figure 2. If the frost line depth is confirmed to be less than 30" as required by the Montgomery County, it's recommended to increase the grade line adjacent to the building by 6" (or as needed to reach minimum 30" depth) for a width of 4'-0".



#7-A, A3.1

Perimeter Skin






Lack of sheet metal parapet cap. Stained & deteriorated mortar joints.




Recommendation:

Install a sheet metal parapet cap and repointing repairs on the south screenwall to prevent further deterioration.





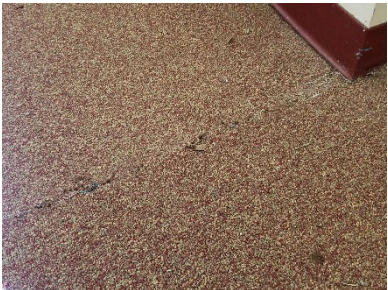

Chevy Chase Library - Facility Assessment

<p>#7-A, A3.2</p> <p>Perimeter Skin</p>		<p>Stained & deteriorated mortar joints.</p>	<p>●</p>		
<p>Recommendation:</p>	<p>Repoint the retaining wall on the north elevation.</p>				
<p>#7-A, A3.3</p> <p>Perimeter Skin</p>		<p>The storefront system and glazed roof at the West entrance vestibule is in generally poor condition and appears to be a source of moisture intrusion.</p>		<p>●</p>	
<p>Recommendation:</p>	<p>Replace the storefront system and glazed roof with a new storefront system and a new standing seam metal roof.</p>				
<p>#7-A, A4</p> <p>Exterior Glazing</p>		<p>The window systems (and doors) appear to be in poor condition.</p>		<p>●</p>	
<p>Recommendation:</p>	<p>Replace the exterior doors and windows throughout.</p>				


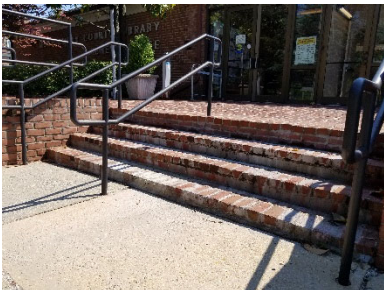

Chevy Chase Library - Facility Assessment

<p>#7-A, A5</p> <p>Interior Partitions</p>		<p>The condition of the drywalls were noted to be good throughout, but required new wall painting.</p>	<p>●</p>		
<p>Recommendation:</p>	<p>Overall the entire facility required new wall painting. Areas missing wall base requires replacement with new wall base.</p>				
<p>#7-A, A6</p> <p>Interior Glazing</p>		<p>Interior glazed partitions are in poor condition.</p>	<p>●</p>		
<p>Recommendation:</p>	<p>Replace interior glazed partitions new.</p>				
<p>#7-A, A7</p> <p>Door / Entranceways</p>		<p>Acceptable but poor.</p>	<p>●</p>		
<p>Recommendation:</p>	<p>Replace the exterior doors (and windows) throughout.</p>				







Chevy Chase Library - Facility Assessment

#7-A, A8.1 Ceilings & Soffits		Random and crudely cut ceiling tiles were observed.			
Recommendation:	Replace the entire ceiling with an exposed grid system. Refer to cost estimate section A-8				
#7-A, A8.2 Ceilings & Soffits		Paint peeling likely caused by moisture presence.			
Recommendation:	Controlling the humidity levels on the Lower floor, and repainting the soffits would help resolve the issue.				
#7-A, A9 Flooring		Flooring condition was noticed to be poor throughout the facility.			
Recommendation:	Replace with new flooring material.				

Chevy Chase Library - Facility Assessment

<p>#7-A, A10.1</p> <p>Stairs & Ramps</p>		<p>Egress stair material finish conditions are poor, and Requires other ADA improvements.</p>	<p>●</p>		
<p>Recommendation:</p>	<p>Replace flooring material and provide recommended ADA improvements.</p>				
<p>#7-A, A10.2</p> <p>Stairs & Ramps</p>		<p>West façade exterior entrance steps are in poor condition.</p>	<p>●</p>		
<p>Recommendation:</p>	<p>Replace entrance steps and entrance podium (and flag pole).</p>				
<p>#7-A, A10.3</p> <p>Stairs & Ramps</p>		<p>The exterior ramp currently isn't fully ADA compliant.</p>	<p>●</p>		
<p>Recommendation:</p>	<p>Replace ADA ramp for full compliance.</p>				

Chevy Chase Library - Facility Assessment

<p>#7-A, A11</p> <p>Elevator System</p>		<p>The current elevator is satisfactory, but requires resolving existing maintenance deficiencies.</p>			
<p>Recommendation:</p>	<p>Resolve as recommended in the VDA, detailed report.</p>				
<p>#7-A, A12</p> <p>Potential Environmental & Hazardous Materials</p>		<p>Asbestos.</p>			
<p>Recommendation:</p>	<p>Apex recommends using their report as a guide and contracting the services of an abatement contractor whose activities comply with applicable local, state and federal requirements.</p>				
<p>#7-A, A13.1</p> <p>Miscellaneous Hazards / Inefficiencies</p>		<p>Book Drop area.</p> <p>Note: Current setup is inefficient and non-ADA accessible. Exterior brick façade seems to get wet. Water seeps into the building interior through the book receiving tray, as a result books get wet.</p>			
<p>Recommendation:</p>	<p>Relocate or redesign exterior Book Drop area to create an efficient setup.</p>				



J-Appendices:

Section-8

Existing Building Exterior: Image Tabulation

Appendix 8



A. Existing Building Exterior: Image Tabulation

Location Identity: North					
Building Facade & Category ID.	Image	Description	Timeline		
			Immediate	Necessary	Extended
#8-A, N1. Concrete Retaining Wall		Cracked and settled Concrete retaining wall and moss buildup on wall. This landscaped area lacks drainage and is causing waterproofing issue for the basement level multi-purpose room.	●		
Recommendation	Removing the landscaped area to waterproof the exterior wall. Provide new landscaping post remediation efforts.				
#8-A, N2. Brick Retaining Wall		Moss build up on brick retaining wall.	●		
Recommendation	Clean brick joints. Treat for moss build up. Repoint brick.				





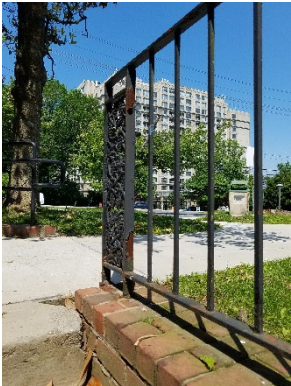

Chevy Chase Library - Facility Assessment

<p>#8-A, N3.</p> <p>Exterior Doors</p>		<p>Exterior doors.</p>			
<p>Recommendation</p>	<p>Replace with new energy efficient doors.</p>				
<p>#8-A, N3.</p> <p>Exterior Windows</p>		<p>Exterior windows.</p>			
<p>Recommendation</p>	<p>Replace with new energy efficient windows. Clean and repaint wood surfaces.</p>				
<p>#8-A, N4.</p> <p>Brick Curb</p>		<p>Brick curb.</p> <p>Note: Missing bricks and moss build up.</p>			
<p>Recommendation</p>	<p>Clean brick joints. Treat for moss build up. Repoint brick.</p>				

Chevy Chase Library - Facility Assessment


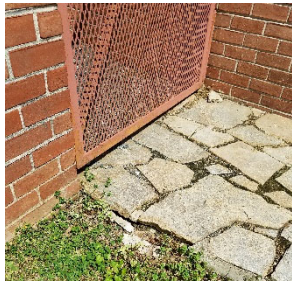
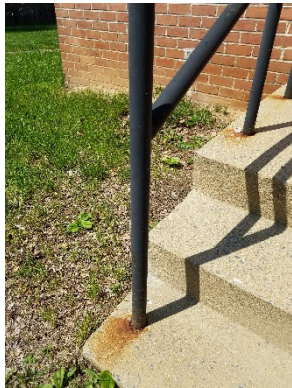
#8-A, N5. Exterior Light Fixture		Exterior light fixture.	<input checked="" type="checkbox"/>		
Recommendation	Replace with new.				
#8-A, N6. Exterior Brick Paving and Brick Facade		Exterior brick paving and brick facade.		<input checked="" type="checkbox"/>	
Recommendation	Treat moss built up areas on brick facade. Replace brick paving with new positively sloped surface with new floor drain. Provide new exterior canopy over areaway.				
#8-A, N7.1 Exterior Ramp		Exterior ramp.		<input checked="" type="checkbox"/>	
Recommendation	Replace with new ADA compliant landing & ramp.				
#8-A, N7.2 Exterior Brick Facade		Exterior brick façade.		<input checked="" type="checkbox"/>	
Recommendation	Clean façade and paved surface. Replace broken brick with new. Treat efflorescence.				

Chevy Chase Library - Facility Assessment








<p>#8-A, N8.</p> <p>Exterior Brick Retaining Wall</p>		<p>Cracked and missing bricks on exterior retaining wall.</p>			
<p>Recommendation</p>	<p>Repair cracks, repoint brick, and replace cracked brick with new. Clean and repaint exterior handrail.</p>				
<p>#8-A, N9.</p> <p>Exterior Stair</p>		<p>Exterior stair.</p>			
<p>Recommendation</p>	<p>Treat moss built area. Repair concrete stairway.</p>				
<p>#8-A, N10.</p> <p>Exterior Metal Handrails</p>		<p>Exterior metal handrails.</p>			
<p>Recommendation</p>	<p>Clean and remove rust. Repaint with exterior paint.</p>				

Chevy Chase Library - Facility Assessment


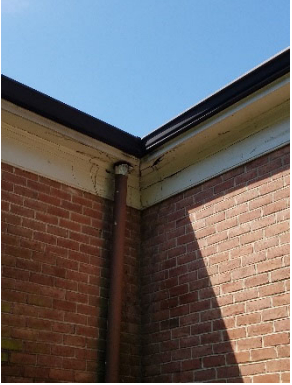

Location Identity: East

Building Facade & Category ID.	Image	Description	Timeline		
			Immediate	Necessary	Extended
#8-A, E1 Wood Trim		Condition of exposed painted wood at downspout	●		
Recommendation	All rotten wood to be replaced and weathered paint to be restored to match existing.				
#8-A, E2. Exterior Paving		Exterior paving.		●	
Recommendation	Clean paved areas and refinish joints.				
#8-A, E3. Metal Handrail		Metal handrail.	●		
Recommendation	Clean handrail and pipe surface. Repaint with exterior grade rust resistant paint. Provide escutcheon at post base.				





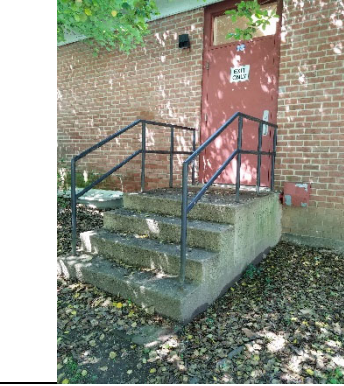

Chevy Chase Library - Facility Assessment




<p>#8-A, E4.</p> <p>Metal Handrail</p>		<p>Metal handrail.</p>			
<p>Recommendation</p>	<p>Clean handrail and pipe surface. Repaint with exterior grade rust resistant paint. Provide escutcheon at post base.</p>				
<p>#8-A, E5.</p> <p>Exterior Utility Box(s)</p>		<p>Paint peeling off the exterior utility box.</p> <p>Exterior doors in poor condition.</p>			
<p>Recommendation</p>	<p>Clean surface and repaint with exterior paint. Replace exterior doors.</p>				
<p>#8-A, E7.</p> <p>Bike Rack</p>		<p>Bike rack, old and corroded.</p>			
<p>Recommendation</p>	<p>Provide with new bike rack.</p>				

Chevy Chase Library - Facility Assessment



<p>#8-A, E8.</p> <p>Exterior Brick</p>		<p>Brick façade requires cleaning and repointing.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Clean surface and treat mold growth, and repoint brick surfaces.</p>				
<p>#8-A, E9.</p> <p>Rain Leaders</p>		<p>Rain leads observed to be old.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Replace with new rain leaders.</p>				
<p>#8-A, E10.</p> <p>Exterior Building Maintenance Pathways</p>		<p>Building maintenance path.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Trim shrubs and maintain access building maintenance path, as part of regular facility maintenance item.</p>				

Chevy Chase Library - Facility Assessment


<p>#8-A, E11.</p> <p>Metal Awning</p>		<p>Water ponding at utility unit metal awning.</p> <p>Note: Stagnant water may cause corrosion and mosquito breeding.</p>			
<p>Recommendation</p>	<p>Resolve issue.</p>				
<p>#8-A, E12.</p> <p>Exterior Building Lighting</p>		<p>Exterior building lighting.</p> <p>Note: Light fixtures working during daytime.</p>			
<p>Recommendation</p>	<p>Resolve issue, as part of regular facility maintenance item.</p>				
<p>#8-A, E13.</p> <p>Egress Door(s).</p>		<p>Egress door.</p>			
<p>Recommendation</p>	<p>Keep egress stair and landing area clean and clear as part of regular facility maintenance item.</p>				

Location Identity: West					
Building Facade & Category ID.	Image	Description	Timeline		
			Immediate	Necessary	Extended
#8-A, W1. Entrance Podium		Brick curb.	●		
Recommendation	Redesign and replace the entrance podium.				
#8-A, W2. Flag Pole		Flag pole.			●
Recommendation	Relocate/re-design flag pole podium.				
#8-A, W3. Exterior Egress Door		Library office egress door. Note: Water ponding on floor surface in front of door.	●		
Recommendation	Repave the existing podium with proper drainage.				





Chevy Chase Library - Facility Assessment

<div>#8-A, W2.</div> <div>Exterior Soffit</div>		Exterior soffit leakage.	<div><div></div></div>		
Recommendation	Investigate leak. Resolve issue. Repaint weathered exterior soffit surfaces.				
<div>#8-A, W7.</div> <div>Rain Leader(s)</div>		Rain leader.	<div><div></div></div>		
Recommendation	Replace rain leaders with new.				


Location Identity: South

Building Facade & Category ID.	Image	Description	Timeline		
			Immediate	Necessary	Extended
#8-A, S1. Exterior Utility Box		Exterior utility box, paint peeling off.			<input checked="" type="radio"/>
Recommendation	Clean and repaint with exterior grade paint.				

Chevy Chase Library - Facility Assessment

<p>#8-A, S2.</p> <p>Exterior Light Fixture</p>		<p>Exterior light fixture.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Replace missing lamp shade with new. Alternately replace existing fixture with new energy efficient light fixture.</p>				
<p>#8-A, S3.</p> <p>Exterior Wood Trim</p>		<p>Exterior wood trim.</p>			<p>●</p>
<p>Recommendation</p>	<p>Replace with new.</p>				
<p>#8-A, S4.</p> <p>Exterior Facade</p>		<p>Exterior facade.</p>			<p>●</p>
<p>Recommendation</p>	<p>Clean brick façade and treat for mold. Repoint and re-caulk brick joints.</p>				
<p>#8-A, S5.</p> <p>Exterior Brick Wall</p>		<p>Exterior brick wall.</p>			<p>●</p>
<p>Recommendation</p>	<p>Clean brick façade and treat for mold. Repoint and re-caulk brick joints.</p>				

Chevy Chase Library - Facility Assessment

#8-A, S6. Exterior Brick Wall		Exterior brick wall.	<div></div>		
Recommendation	Clean brick façade and treat for mold. Repoint and re-caulk brick joints. Provide new coping at parapet.				




J-Appendices:

Section-9


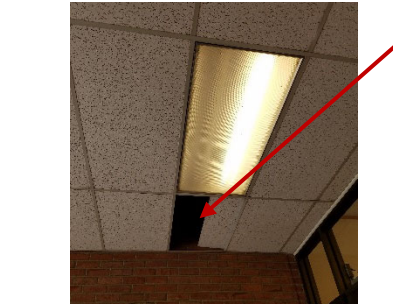
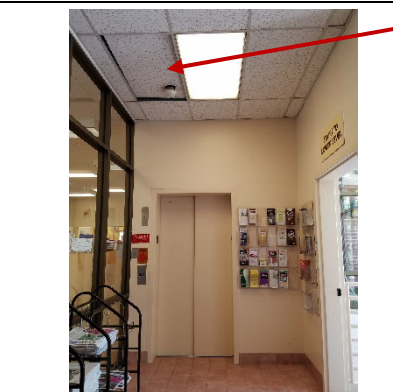

Existing Building Interior: Image Tabulation

Appendix 9




A. Existing Building Interior: Image Tabulation

Space Identity: Room #101. Entrance Vestibule, Front Entrance					
RM # & Architectural System	Image	Description	Timeline		
			Immediate	Necessary	Extended
#9-A, 101-A5. Interior Partitions		Water leakage. Discolored brick. Efflorescence on brick due to moisture creep.	●	●	●
Recommendation	Provide new storefront system and new standing seam metal roof. Clean and treat mold and mildew growth on interior brick.				
#9-A, 101-A5. Interior Partitions		Chipped Brick.		●	
Recommendation	Patch and repair to match existing.				
#9-A, 101-A6. Interior Glazing		Entrance Vestibule Glazing is causing glare.		●	
Recommendation	Replace existing vestibule with new storefront system and new metal roof.				



Chevy Chase Library - Facility Assessment

#9-A, 101-A7. Doors / Entranceways		Damaged floor tile and door threshold.		<input checked="" type="radio"/>	
Recommendation	Replace existing threshold with new.				
#9-A, 101-A8. Ceilings & Soffits		Ceiling tile out of place.	<input checked="" type="radio"/>		
Recommendation	Re-position ceiling tile within grid, as part of facility maintenance.				
#9-A, 101-A8. Ceilings & Soffits		Ceiling tile out of place.	<input checked="" type="radio"/>		
Recommendation	Re-position ceiling tile within grid, as part of facility maintenance.				
#9-A, 101-A9. Flooring		Add on mat placed on entry matting system – visually unpleasing and may cause a tripping hazard.	<input checked="" type="radio"/>		
Recommendation	Removing the loose mat. Check issues with existing entry matting system. If required replace with new.				


Space Identity: Room #102. Library Lobby & Reception

RM # & Architectural System	Image	Description	Timeline		
			Immediate	Necessary	Extended
#9-A, 102-A5. Interior Partitions		Paint peeling off.	●		
Recommendation	Clean affected area. Patch and paint to match adjacent color and finish.				
#9-A, 102-A8. Ceilings & Soffits		Mechanical grille not flush with wall. Grille looks old and dirty.	●		
Recommendation	Replace as appropriate.				
#9-A, 102-A8. Ceilings & Soffits		Lose smoke detector. Damaged ceiling tile.		●	
Recommendation	Replace ceiling tile and secure smoke detector. Recommend installing a new ceiling system with ceiling grid.				


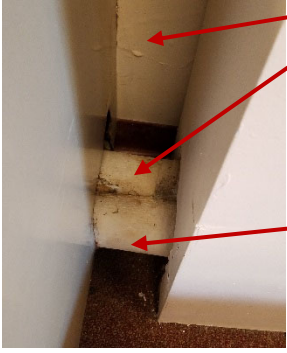


Chevy Chase Library - Facility Assessment

#9-A, 102-A8. Ceilings & Soffits		Damaged ceiling tiles.			<input checked="" type="radio"/>
Recommendation	Replace ceiling tile. Recommend installing a new ceiling system with ceiling grid. Ref. cost estimate section				
#9-A, 102-A9. Flooring		Worn-out carpet.	<input checked="" type="radio"/>		
Recommendation	Replace as appropriate with new flooring material.				



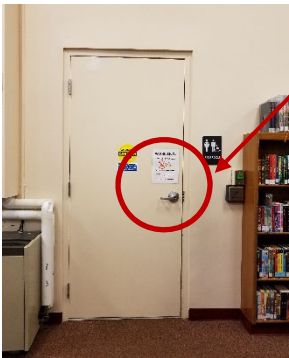
Space Identity: Room #103. Children's Reference

RM # & Architectural System	Image	Description	Timeline		
			Immediate	Necessary	Extended
#9-A, 103-A5. Interior Partitions		Paint peeling.	<input checked="" type="radio"/>		
Recommendation	Replace existing glazed partition with new.				


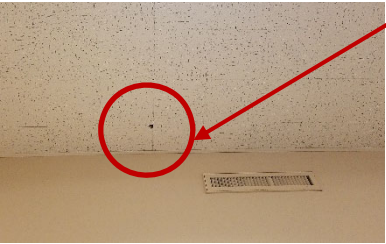


Chevy Chase Library - Facility Assessment

#9-A, 103-A5. Interior Partitions		Walls require a new coat of paint. Existing paint peeling in selective areas.	●		
Recommendation	Clean, patch and paint to match adjacent color and finish.				
#9-A, 103-A5. Interior Partitions		Paint peeling on the walls (and the A/C piping). Area under exposed pipes are causing dirt and dust collection.	●	●	
Recommendation	Replace fan coil unit with new (see mechanical report for additional information).				
#9-A, 103-A5. Interior Partitions		Paint peeling.	●		
Recommendation	Clean affected area. Patch and paint to match adjacent color and finish.				
#9-A, 103-A5. Interior Partitions		Cracked wall.	●		
Recommendation	Patch and paint to match adjacent color and finish.				




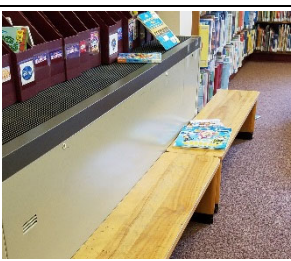
Chevy Chase Library - Facility Assessment

#9-A, 103-A6. Interior Glazing		Paint peeling. Dirty window sill(s).		● ●	
Recommendation	Replace windows and sills with new.				
#9-A, 103-A7. Doors / Entranceways		Emergency exit door paint is weathered.	●		
Recommendation	Replace with new egress doors.				
#9-A, 103-A7. Doors / Entranceways		Uni-sex/family restroom door lock broken.	●		
Recommendation	Repair/replace lock.				




Chevy Chase Library - Facility Assessment

#9-A, 103-A7. Doors / Entranceways		ADA door activator clearance blocked by furniture.	<input checked="" type="checkbox"/>		
Recommendation	Clear area.				
#9-A, 103-A8. Ceilings & Soffits		Chipped ceiling tile.			<input checked="" type="checkbox"/>
Recommendation	Installing a new ceiling system on a ceiling grid.				
#9-A, 103-A8. Ceilings & Soffits		Cracked soffit, peeling paint, Unmatched paint colors.	<input checked="" type="checkbox"/>		
Recommendation	Clean affected area. Patch and paint to match adjacent color and finish.				
#9-A, 103-A9. Flooring		Carpet is old, weathered, stained and dirty.	<input checked="" type="checkbox"/>		
Recommendation	Replace with new flooring material.				




Chevy Chase Library - Facility Assessment

<p>#9-A, 103-A12.</p> <p>Potential environmental & hazardous materials</p>		<p>A/C unit is corroded and dirty. Area looks hazardous to children.</p> <p>Pest control placed under the unit.</p>	<p>●</p> <p>●</p>		
<p>Recommendation</p>	<p>Replace A/C units with new. Address pest control issues.</p>				
<p>#9-A, 103-A13.</p> <p>Miscellaneous Hazards / Inefficiencies</p>		<p>Furniture is non-adjustable and unsuitable for child size use, i.e., table, chair, keyboard tray.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Replace with new adjustable user-friendly computer stations.</p>				
<p>#9-A, 103-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Exposed wires and adjacent loose furniture may cause tripping and other dangerous conditions to children.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Reconsider furniture arrangement and wire management.</p>				
<p>#9-A, 103-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Top surface of A/C unit used as book display area, seems to block air flow.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Clear area. Recommend relocating and reconsidering book/periodical display methods.</p>				





Chevy Chase Library - Facility Assessment

<p>#9-A, 103-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Exposed pipes.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Install new system (see Mechanical report for additional information).</p>				
<p>#9-A, 103-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Lose furniture base, may cause a tripping hazard.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Remove rubber base and refurbish/refinish the display racks.</p>				
<p>#9-A, 103-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Rough and unfinished display rack surfaces. Wood chipping noticed.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Refurbish display racks.</p>				



Space Identity: Room #104. Teen's Reference

RM # & Architectural System	Image	Description	Timeline		
			Immediate	Necessary	Extended
#9-A, 104-A5. Interior Partitions		Peeling paint.	●		
Recommendation	Replace existing with new glazed partition.				
#9-A, 104-A5. Interior Partitions		Mold growth on paint surface.	●		
Recommendation	Investigate presence of moisture. Resolve issue. Clean affected area. Patch and paint to match adjacent color and finish.				
#9-A, 104-A5. Interior Partitions		Sound tends to travel out of this room due to low walls.	●		
Recommendation	Extend partition above ceiling.				

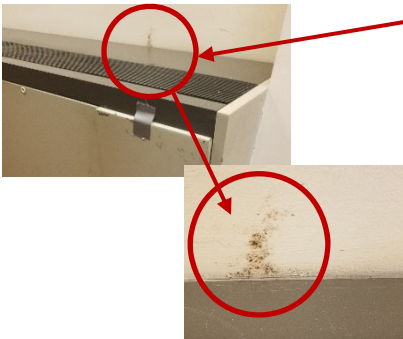


Chevy Chase Library - Facility Assessment

#9-A, 104-A6. Window blinds		Window blinds seem to have been provided, but are currently missing.	<input checked="" type="checkbox"/>		
Recommendation	Investigate if window glare is caused in this space and provide window blinds if required.				
#9-A, 104-A8. Ceilings & Soffits		Chipped & mismatched ceiling tile.			<input checked="" type="checkbox"/>
Recommendation	Installing a new ceiling system on a ceiling grid.				
#9-A, 104-A9. Flooring		Existing carpet looks old and battered.	<input checked="" type="checkbox"/>		
Recommendation	Replace with new flooring material.				
#9-A, 104-A13. Miscellaneous Hazards / inefficiencies		Damaged wood.		<input checked="" type="checkbox"/>	
Recommendation	Refurbish or replace with new.				


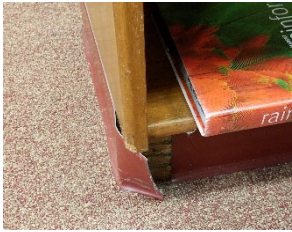
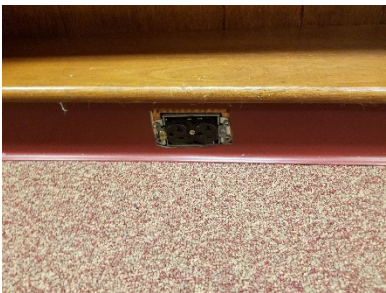
Chevy Chase Library - Facility Assessment

<p>#9-A, 104-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Wire runs may cause a trip hazard.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Provide new electrical wiring, secured to wall and unexposed to occupants.</p>				
<p>#9-A, 104-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Surface mounted exposed electrical outlet(s).</p>	<p>●</p>		
<p>Recommendation</p>	<p>Provide new electrical outlet locations. Current condition may cause trip hazard.</p>				



Space Identity: Room #105. Adult Reference

RM # & Architectural System	Image	Description	Timeline		
			Immediate	Necessary	Extended
#9-A, 105-A5. Interior Partitions		Mold growth on wall.	●		
Recommendation	Investigate moisture source. Repair issue. Patch and paint to match adjacent color and finish.				
#9-A, 105-A5. Interior Partitions		Crude wall filling.	●		
Recommendation	Repair and finish industry standards.				
#9-A, 105-A8. (Image-2) Ceilings & Soffits		Existing adult computer stations are fed through vertical wire management. Ceiling penetrations are crude.			●
Recommendation	Installing a new ceiling system on a grid. Relocate the computer stations elsewhere and redesign an efficient layout for the user.				


Chevy Chase Library - Facility Assessment

<p>#9-A, 105-A8.</p> <p>Ceilings & Soffits</p>		<p>Missing light fixture cover.</p> <p>Lose light fixture cover</p>	<p>●</p> <p>●</p>		
<p>Recommendation</p>	<p>Provide new cover to missing area. Secure the cover in the other fixture. Suggest replacing surface mounted light fixtures with new recessed type as part of new ceiling replacement.</p>				
<p>#9-A, 105-A9.</p> <p>Flooring</p>		<p>Existing carpet is old and battered.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Replace with new flooring material.</p>				
<p>#9-A, 105-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Rubber base installed on existing book shelves are lose in some locations, which may cause a trip hazard.</p>		<p>●</p>	
<p>Recommendation</p>	<p>Remove rubber base fastened to bookshelf. Refurbish existing bookshelf for use.</p>				
<p>#9-A, 105-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Missing electrical outlet cover plate.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Provide new cover to missing area.</p>				



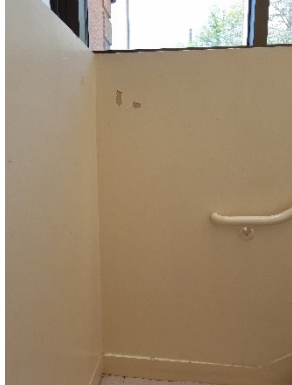
Chevy Chase Library - Facility Assessment

#9-A, 105-A13. Miscellaneous Hazards / inefficiencies		Damaged electrical outlet cover plate.	<input checked="" type="radio"/>		
Recommendation	Replace with new.				
#9-A, 105-A13. Miscellaneous Hazards / inefficiencies		A/C unit faceplate held in-place with duct tape.	<input checked="" type="radio"/>		
Recommendation	Suggest replacing with new.				









Space Identity: Room #107. Stairway

RM # & Architectural System	Image	Description	Timeline		
			Immediate	Necessary	Extended
#9-A, 107-A5. Interior Partition		Cracked wall paint behind main level interior door.	<input checked="" type="radio"/>		
Recommendation	Clean area, re-paint to match existing color and finish. Refer to the cost estimate section				




Chevy Chase Library - Facility Assessment

<p>#9-A, 107-A5.</p> <p>Interior Partition</p>		<p>Damaged wall base.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Remove existing rubber base. Replace with new to match adjacent existing base. Refer to the cost estimate section</p>				
<p>#9-A, 107-A5.</p> <p>Interior Partition</p>		<p>Hairline cracks in wall.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Identify settlement issue if any. Patch, repair and paint to match adjacent color and finish. Refer to the cost estimate section</p>				
<p>#9-A, 107-A5.</p> <p>Interior Partition</p>		<p>Peeling paint.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Clean area, re-paint to match existing color and finish. Refer to the cost estimate section</p>				

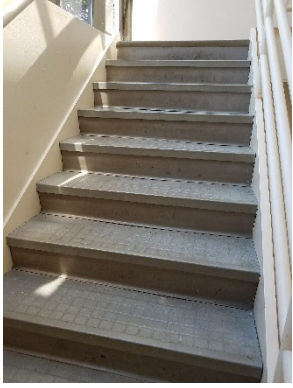


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#9-A, 107-A5. Interior Partition		Missing paint area.			
Recommendation	Clean area, re-paint to match existing color and finish. Refer to the cost estimate section				
#9-A, 107-A7. Doors / Entranceways		Door stop old.			
Recommendation	Replace existing with new. Refer to the cost estimate section				
#9-A, 107-A8. Ceilings & Soffits		Moisture damaged soffit.			
Recommendation	Identify moisture causing source. Repair issue. Clean area, re-paint to match existing color and finish. Refer to the cost estimate section				
#9-A, 107-A8. Ceilings & Soffits		Moisture damaged soffit.			
Recommendation	Identify moisture causing source. Repair issue. Clean area, re-paint to match existing color and finish. Refer to the cost estimate section				



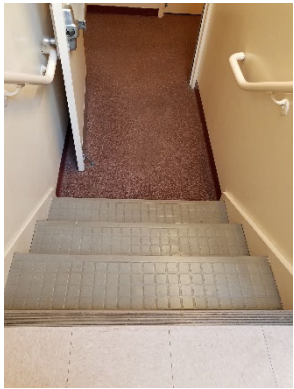



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#9-A, 107-A8. Ceilings & Soffits		Pen/pencil marks on ceiling.			
Recommendation	Clean area, re-paint to match existing color and finish. Refer to the cost estimate section				
#9-A, 107-A9. Flooring		Weathered flooring material.			
Recommendation	Replace with new VCT. Refer to the cost estimate section				
#9-A, 107-A9. Flooring		Old and weathered carpet material.			
Recommendation	Replace with new flooring material. Refer to the cost estimate section				



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#9-A, 107-A10. Stairs & ramps		Weathered flooring material on steps.	<input checked="" type="radio"/>		
Recommendation	Replace with new non-skid flooring material. Refer to the cost estimate section				
#9-A, 107-A10. Stairs & ramps		Missing paint.	<input checked="" type="radio"/>		
Recommendation	Clean area, re-paint to match existing color and finish. Refer to the cost estimate section				
#9-A, 107-A10. Stairs & ramps		Paint coat applied over crude concrete/rust.		<input checked="" type="radio"/>	
Recommendation	Clean area, re-paint to match existing color and finish. Refer to the cost estimate section				


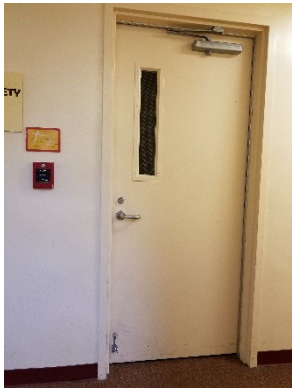

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#9-A, 107-A10. Stairs & ramps		Lose handrail escutcheon.			
Recommendation	Secure escutcheon to wall. Repaint surrounding area to match existing color and finish. Refer to the cost estimate section				
#9-A, 107-A13. Miscellaneous Hazards / inefficiencies		In sufficient space for an area of refuge within stair wall.			
Recommendation	Suggest investigating options to improve existing condition. Refer to the cost estimate section				
#9-A, 107-A13. Miscellaneous Hazards / inefficiencies		Lose light fixture.			
Recommendation	Patch wall, paint to match adjacent color and finish. Secure lose fixture. Refer to the cost estimate section				


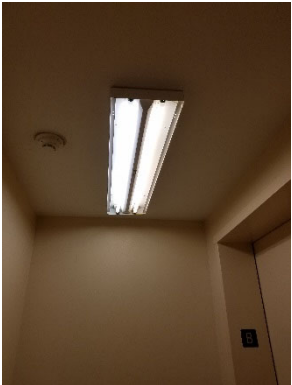

Space Identity: Room #G101. Corridor

RM # & Architectural System	Image	Description	Timeline		
			Immediate	Necessary	Extended
#9-A, G101-A5. Interior Partitions		Area requires paint touch up and new signage.	●		
Recommendation	Clean area. Patch and repaint surface to match adjacent color & finish. Refer to the cost estimate section				
#9-A, G101-A5. Interior Partitions		Drinking water fountain. Damaged wall tile.	●		
Recommendation	Replace with ADA accessible high-low type. Note that the existing space seems insufficient for new type. Recommend relocating the drinking foundation for proper code compliant ADA access clearances. Provide new wall tile to replace damaged tiles.				

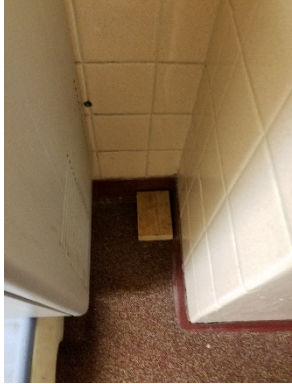

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<p>#9-A, G101-A5.</p> <p>Interior Partitions</p>		<p>Unused wall attachments.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Remove unused wall attachments.</p>				
<p>#9-A, G101-A7.</p> <p>Doors / entranceways</p>		<p>Dirty door bottom.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Provide a door kick plate.</p>				
<p>#9-A, G101-A7.</p> <p>Doors / entranceways</p>		<p>Janitor room door bottom damaged.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Replace door with new to match existing. Provide a door kick plate.</p>				


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<p>#9-A, G101-A7.</p> <p>Doors / entranceways</p>		<p>Corrosion presence at door frame bottom.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Clean area. Patch dents and repaint to match adjacent color & finish.</p>				
<p>#9-A, G101-A8.</p> <p>Ceilings & soffits</p>		<p>Missing light fixture cover.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Suggest installing new light fixture cover.</p>				
<p>#9-A, G101-A8.</p> <p>Ceilings & soffits</p>		<p>Lose access panel.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Install new access panel flushed with ceiling surface.</p>				

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#9-A, G101-A9. Flooring		Lose wood block on floor.	<input checked="" type="radio"/>		
Recommendation	Remove and clean floor surface.				
#9-A, G101-A9. Flooring		Carpet looks old.	<input checked="" type="radio"/>		
Recommendation	Replace with new floor finish.				

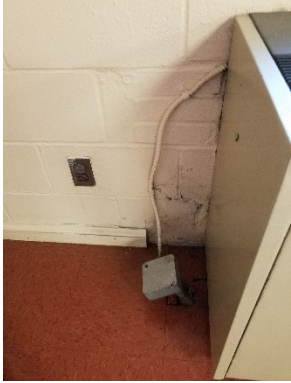

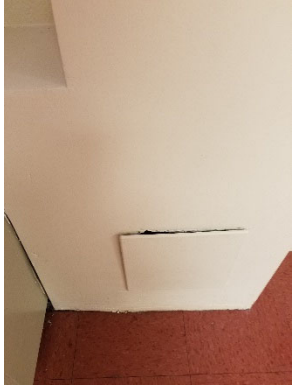
Space Identity: Room #G104. Multi-purpose Room

RM # & Architectural System	Image	Description	Timeline		
			Immediate	Necessary	Extended
#9-A, G104-A5. Interior Partitions		Outdated controls systems.	<input checked="" type="radio"/>		
Recommendation	Replace as part of new renovation work.				

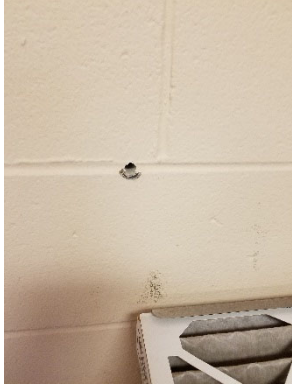


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#9-A, G104-A5. Interior Partitions		Damaged gypsum wall partition.			
Recommendation	Patch, repair and paint to match adjacent color & finish.				
#9-A, G104-A5. Interior Partitions		Paint peeling on CMU walls.			
Recommendation	Resolve moisture presence with adequate waterproofing and dampproofing methods. Clean and repaint surface.				
#9-A, G102-A7. Doors / entranceways		Paint on wood wall base peeling. Base detaching from wall in other places.			
Recommendation	Install new wall base in room.				




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<p>#9-A, G102-A7.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Dirty walls.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Clean surface.</p>				
<p>#9-A, G104-A5.</p> <p>Interior Partitions</p>		<p>Partition to mechanical unit transition/seal.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Replace crude work with clean transition joint/seal.</p>				
<p>#9-A, G104-A5.</p> <p>Interior Partitions</p>		<p>Access panel on partition.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Replace with new to type installed flushed with wall.</p>				







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#9-A, G104-A5. Interior Partitions		Hole in CMU wall.	<input checked="" type="checkbox"/>		
Recommendation	Caulk hole in CMU wall. Paint to match adjacent color & finish.				
#9-A, G104-A6. Interior Glazing		Window blind trim.	<input checked="" type="checkbox"/>		
Recommendation	Remove dirt and refinish.				
#9-A, G104-A7. Doors / entranceways		Door frame and sash requires new paint coat.	<input checked="" type="checkbox"/>		
Recommendation	Clean surface. Paint to match adjacent color & finish.				
#9-A, G104-A7. Doors / entranceways		Old exterior door sidelite.	<input checked="" type="checkbox"/>		
Recommendation	Replace with new.				

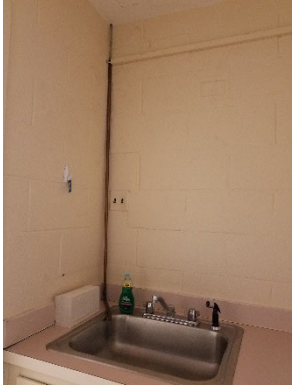





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<p>#9-A, G104-A7.</p> <p>Doors / entranceways</p>		<p>Old exterior door. Insufficient weather stripping.</p>			
<p>Recommendation</p>	<p>Replace with new.</p>				
<p>#9-A, G104-A7.</p> <p>Doors / entranceways</p>		<p>Door threshold.</p>			
<p>Recommendation</p>	<p>Replace with new.</p>				
<p>#9-A, G104-A8.</p> <p>Ceilings & soffits</p>		<p>Old and lose access panel.</p>			
<p>Recommendation</p>	<p>Replace with new.</p>				





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<p>#9-A, G104-A8.</p> <p>Ceilings & soffits</p>		<p>Ceiling grid detaching.</p>			
<p>Recommendation</p>	<p>Replace with new.</p>				
<p>#9-A, G104-A8.</p> <p>Ceilings & soffits</p>		<p>Paint peeling off ceiling.</p>			
<p>Recommendation</p>	<p>Resolve moisture presence with adequate damp proofing methods. Clean and repaint surface.</p>				
<p>#9-A, G104-A9.</p> <p>Flooring</p>		<p>Old flooring material.</p>			
<p>Recommendation</p>	<p>Replace with new.</p>				



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<p>#9-A, G104-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>A/C condensation water released to hand sink.</p>			
<p>Recommendation</p>	<p>Resolve existing condition.</p>				
<p>#9-A, G104-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Sink is not ADA accessible.</p>			
<p>Recommendation</p>	<p>Resolve condition to provide ADA accessible sink and millwork.</p>				
<p>#9-A, G104-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Exposed storage shelves.</p>			
<p>Recommendation</p>	<p>Provide storage closet doors to conceal storage.</p>				

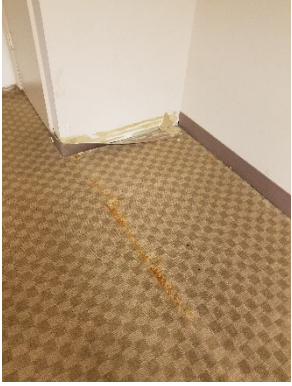

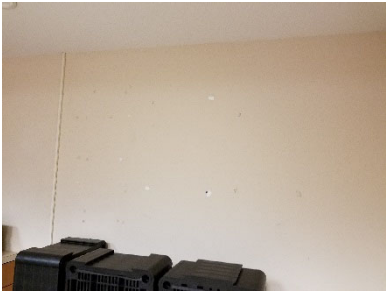
Chevy Chase Library - Facility Assessment

#9-A, G104-A13. Miscellaneous Hazards / inefficiencies		Random items, i.e. lose carpet role, stored in room.			
Recommendation	Resolve existing condition. Proper long-term storage required for lose furniture.				
#9-A, G104-A13. Miscellaneous Hazards / inefficiencies		Dehumidifier runs 24/7. Space has high moisture presence.			
Recommendation	Resolve condition to provide long term solution.				




Space Identity: Room #G105. Meeting Room

RM # & Architectural System	Image	Description	Timeline		
			Immediate	Necessary	Extended
#9-A, G105-A5. Interior Partitions		Interior partition missing paint.			
Recommendation	Paint to match adjacent color & finish.				

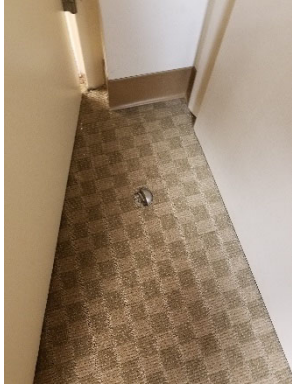


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#9-A, G105-A5. Interior Partitions		Wall base peeling off.	<input checked="" type="radio"/>		
Recommendation	Replace with new.				
#9-A, G105-A5. Interior Partitions		Dirty walls and electrical outlet.	<input checked="" type="radio"/>		
Recommendation	Provide new paint coat. Replace electrical face plate with new.				
#9-A, G105-A5. Interior Partitions		Dirty walls.	<input checked="" type="radio"/>		
Recommendation	Repaint existing walls.				




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<p>#9-A, G105-A5.</p> <p>Interior Partitions</p>		<p>High voltage electrical panel.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Provide prominent sign noting 'high voltage'. Current sign is small. Patch and paint area around face panel.</p>				
<p>#9-A, G105-A5.</p> <p>Interior Partitions</p>		<p>Current storage closet in fully accessible due to inefficient layout.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Redesign the storage closet for better use.</p>				
<p>#9-A, G105-A7.</p> <p>Doors / entranceways</p>		<p>Door not provided with foot plate.</p> <p>Room requires signage indicating room name.</p>	<p>●</p> <p>●</p>		
<p>Recommendation</p>	<p>Provide new foot plate.</p>				



Chevy Chase Library - Facility Assessment

<p>#9-A, G105-A7.</p> <p>Doors / entranceways</p>		<p>Old door stop.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Replace with new.</p>				
<p>#9-A, G105-A8.</p> <p>Ceilings & soffits</p>		<p>Unsightly wood wedges inserted between face of wall and edge of ceiling.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Investigate reason, fix issue and remove temporary wood wedges.</p>				
<p>#9-A, G105-A9.</p> <p>Flooring</p>		<p>Stained carpet.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Deep clean carpet. Alternately replace with new flooring.</p>				



Chevy Chase Library - Facility Assessment

<p>#9-A, G105-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Missing base cabinet.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Provide new base cabinet. Current condition if unnoticed may cause head injury from sitting to standing position.</p>				
<p>#9-A, G105-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Dehumidifier in room.</p>	<p>●</p>		
<p>Recommendation</p>	<p>This equipment functions 24/7. Investigate moisture presence and fix issues to create space and energy efficiency.</p>				
<p>#9-A, G105-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Unightly technology equipment storage.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Organize room for better space efficiency.</p>				


Chevy Chase Library - Facility Assessment

<p>#9-A, G105-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Additional equipment placed at room perimeter seems to reduce usable room space.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Organize room for better space efficiency.</p>				
<p>#9-A, G105-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Random storage.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Organize room for better space efficiency. Create efficient storage areas.</p>				
<p>#9-A, G105-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Lose trash and recycling bins.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Create designated area, i.e., built-in millwork to house trash & recycling bins in lieu of lose bins which is unsightly and creates clutter.</p>				



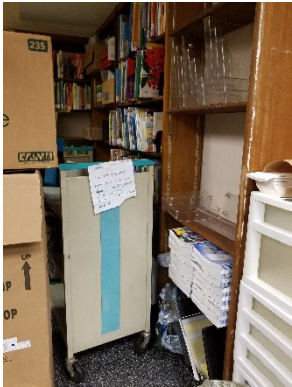
Chevy Chase Library - Facility Assessment

#9-A, G105-A13. Miscellaneous Hazards / inefficiencies		Book storage shelves.	<input checked="" type="radio"/>		
Recommendation	Provide efficient book storage shelves and re-organize room for better space efficiency.				
#9-A, G105-A13. Miscellaneous Hazards / inefficiencies		Random storage items blocking A/C unit.	<input checked="" type="radio"/>		
Recommendation	De-clutter room. Re-organize room for better space efficiency.				



Space Identity: Room #G106. Storage Room

RM # & Architectural System	Image	Description	Timeline		
			Immediate	Necessary	Extended
#9-A, G106-A8. Ceilings & soffits		Missing ceiling tiles.	<input checked="" type="radio"/>		
Recommendation	Install ceiling tiles to match existing in areas that's missing ceiling tiles as part of facility maintenance item.				


Chevy Chase Library - Facility Assessment

<p>#9-A, G106-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Lose material and equipment randomly placed.</p> <p>Storage room is very cluttered and disorganized.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Create designated storage areas to efficiently use available storage.</p>				
<p>#9-A, G106-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Lose material and equipment randomly placed.</p> <p>Storage room is very cluttered and disorganized.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Provide efficient book storage shelves and re-organize room for better space efficiency.</p>				
<p>#9-A, G106-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Book storage shelves inaccessible.</p> <p>Storage room is very cluttered and disorganized.</p>	<p>●</p>		
<p>Recommendation</p>	<p>De-clutter room. Provide designated and efficient storage racks. Re-organize room for better space efficiency.</p>				

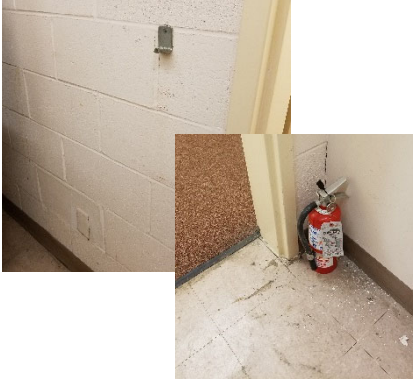

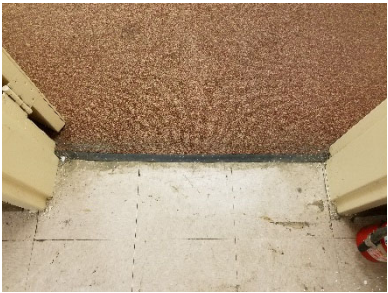
Chevy Chase Library - Facility Assessment

#9-A, G106-A13. Miscellaneous Hazards / inefficiencies		Lose material and equipment randomly placed. Storage room is very cluttered and disorganized.	<input checked="" type="radio"/>		
Recommendation	Create designated storage areas to efficiently use available storage.				
#9-A, G106-A13. Miscellaneous Hazards / inefficiencies		Lose material and equipment randomly placed. Storage room is very cluttered and disorganized.	<input checked="" type="radio"/>		
Recommendation	Create designated storage areas to efficiently use available storage.				

Space Identity: Room #G107. Elevator Closet

RM # & Architectural System	Image	Description	Timeline		
			Immediate	Necessary	Extended
#9-A, G107-A5. Interior Partitions		Partition chipped.	<input checked="" type="radio"/>		
Recommendation	Patch and paint to match adjacent color & finish.				



Chevy Chase Library - Facility Assessment

<p>#9-A, G107-A5.</p> <p>Interior Partitions</p>		<p>Unused steel bracket on wall.</p> <p>Fire extinguisher placed on floor.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Remove if not required. Provide new wall bracket to place fire extinguisher of wall in visible sight.</p>				
<p>#9-A, G107-A5.</p> <p>Interior Partitions</p>		<p>Dirty air grille.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Clean grille as part of regular facility maintenance program.</p>				
<p>#9-A, G107-A7.</p> <p>Doors / entranceways</p>		<p>Dirty door threshold area.</p>	<p>●</p>		
<p>Recommendation</p>	<p>Replace flooring material with new.</p>				







Chevy Chase Library - Facility Assessment

#9-A, G107-A9.		Dirty floor surface.	<input checked="" type="radio"/>		
Flooring					
Recommendation	Replace flooring material with new.				




Space Identity: Room #G108. Mechanical Equipment Room

RM # & Architectural System	Image	Description	Timeline		
			Immediate	Necessary	Extended
#9-A, G108-A5. Interior Partitions		Peeling paint. Missing drywall at bottom of wall. No wall base.	<input checked="" type="radio"/>		
Recommendation	Repair wall. Re-paint walls with appropriate paint type.				
#9-A, G108-A5. Interior Partitions		Peeling paint due to possible moisture presence. Condition is consistent throughout wall perimeter walls and interior walls in the space.	<input checked="" type="radio"/>		
Recommendation	Investigate and fix issue. Re-paint walls with appropriate paint type.				

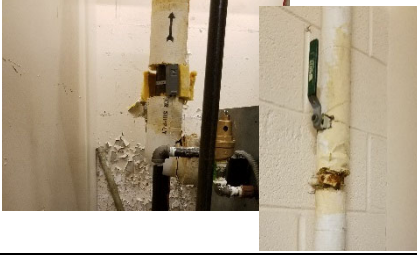
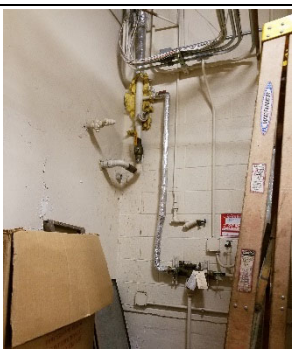
Chevy Chase Library - Facility Assessment

<p>#9-A, G108-A7.</p> <p>Doors / entranceways</p>		<p>Bottom of door frame rusted.</p>			
<p>Recommendation</p>	<p>Repair or replace frame. Re-paint walls with appropriate paint type.</p>				
<p>#9-A, G108-A8.</p> <p>Ceilings & soffits</p>		<p>Un-caulked ceiling/soffit penetrations.</p>			
<p>Recommendation</p>	<p>Re-caulk ceiling openings with fireproofed caulking.</p>				
<p>#9-A, G108-A9.</p> <p>Flooring</p>		<p>Floor paint peeling.</p> <p>Missing floor drain grate.</p>			
<p>Recommendation</p>	<p>Re-paint floor with appropriate paint type. Provide floor drain grate.</p>				

Chevy Chase Library - Facility Assessment

<p>#9-A, G108-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Lose items stored in the Mechanical room.</p>			●
<p>Recommendation</p>	<p>Remove and clear floor areas around equipment and stair landing, as part of regular facility maintenance item.</p>				
<p>#9-A, G108-A8.</p> <p>Ceilings & soffits</p>		<p>Equipment and maintenance manuals.</p>			●
<p>Recommendation</p>	<p>Appropriately store these, as part of regular facility maintenance item.</p>				
<p>#9-A, G108-A13.</p> <p>Miscellaneous Hazards / inefficiencies</p>		<p>Rust damage on Equipment.</p>			●
<p>Recommendation</p>	<p>Clean surface areas and maintain Equipment, as part of regular facility maintenance item.</p>				

Chevy Chase Library - Facility Assessment

<p>#9-A, G108-A8.</p> <p>Ceilings & soffits</p>		<p>Pipe insulation opened up.</p> <p>Wall clamps rusting</p>			●
<p>Recommendation</p>	<p>Fix as appropriate, as part of regular facility maintenance item.</p>				
<p>#9-A, G108-A9.</p> <p>Flooring</p>		<p>Storage items.</p>			●
<p>Recommendation</p>	<p>Re-consider how lose items are stored within the mechanical room, as part of regular facility maintenance item.</p>				



J-Appendices:

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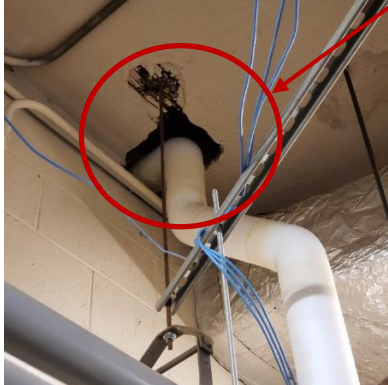
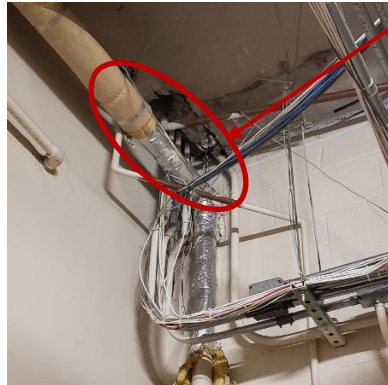
Structural Systems: Image Tabulation

Appendix 10

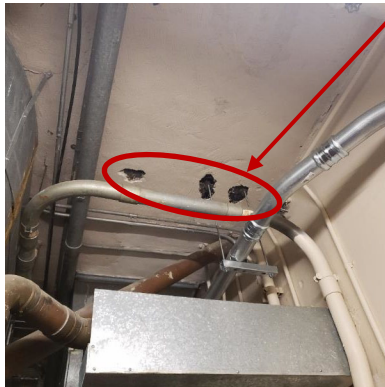
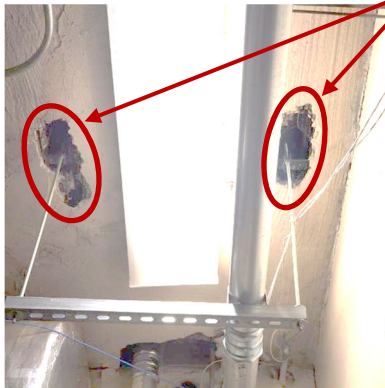
B. Structural Systems: Image Tabulation

Picture #	Image	Description	Timeline		
			Immediate	Necessary	Extended
#10-B, B1.1 East face of the building		Gap between building enclosure and concrete stair landing.	●		
Recommendation:	Provide caulking all around the gap to prevent further growth of the gap opening.				
#10-B, B1.2 Mechanical and Equipment Room		Damaged concrete stair landing.	●		
Recommendation:	Patch using Portland cement-based patching compound.				



Chevy Chase Library - Facility Assessment

Picture #	Image	Description	Timeline		
			Immediate	Necessary	Extended
#10-B, B1.3 Mechanical and Equipment Room		Pipe penetration through the wall without proper fire proofing	●		
#10-B, B1.4 Mechanical and Equipment Room		Pipe penetration through the wall without proper fire proofing.	●		
#10-B, B1.5 Mechanical and Equipment Room		Pipe penetration through the wall without proper fire proofing.	●		


Chevy Chase Library - Facility Assessment

Picture #	Image	Description	Timeline		
			Immediate	Necessary	Extended
#10-B, B1.6 Mechanical and Equipment Room		Holes made in the ceiling without proper fire proofing.	●		
#10-B, B1.7 Mechanical and Equipment Room		Holes made in the ceiling without proper fire proofing.	●		
Recommendation:	Properly fill and patch existing holes in ceiling and walls to meet building fireproofing requirements. Also, see architectural recommendations.				

Chevy Chase Library - Facility Assessment

Picture #	Image	Description	Timeline		
			Immediate	Necessary	Extended
#10-B, B1.8 Mechanical and Equipment Room		Damage to base of partition wall.	●		
#10-B, B1.9 Mechanical and Equipment Room		Damage to base of partition wall.	●		
Recommendation:	Patch the wall at the base using cement plaster and paint to match with the existing wall color.				

Chevy Chase Library - Facility Assessment

Picture #	Image	Description	Timeline		
			Immediate	Necessary	Extended
#10-B, B1.10 Mechanical and Equipment Room		Rust on sump cover.	●		
Recommendation:	Test to verify functionality of the sump pump (see MEP report for additional details). Clean the rust from sump cover and paint with rust proof primer.				


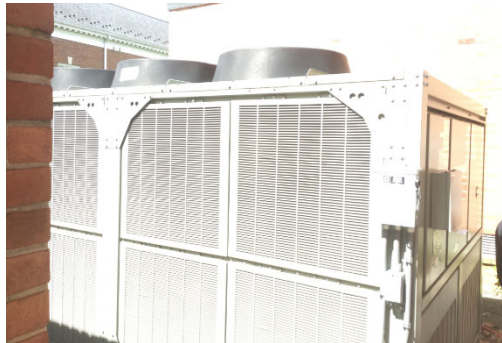
J-Appendices:





Section-11

Mechanical Systems: Image Tabulation



Appendix 11

C. Mechanical Systems: Image Tabulation


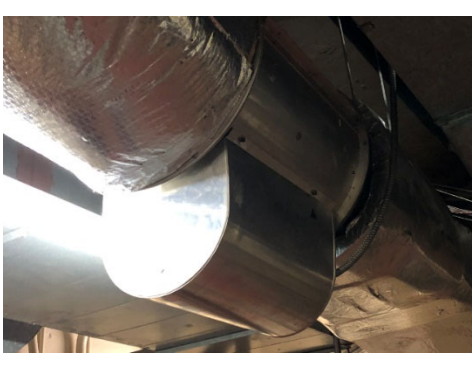

Equipment or System	Description	Image	Timeline		
			Immediate	Necessary	Extended
#11-C, C1.1 Heating System	The Weil-McLain natural gas boiler was installed during the building's 1990 renovation project. The unit shows significant levels of corrosion and part deterioration.		●		
Recommendations:	The boiler is in poor mechanical condition and past its expected service life. This boiler should be removed and replaced with two new high efficiency natural gas fired condensing boilers at 60% capacity (800,000 BTU) each for better heating control and redundancy. Further breakdown of exact replacement requirements can be found in category C1 of the cost estimate.				
#11-C, C2.1 Air Conditioning System	The current Trane CGAM 60 ton capacity outdoor chiller is of newer construction and exhibits minimal corrosion. The unit proved in good operating condition and does not require replacement.				
Recommendations:	The current outdoor chiller has a long service life and does not need to be replaced in the foreseeable future. Category C2 of the cost estimate reiterates no action is required for this system.				

<p>#11-C, C3.1</p> <p>Air Distribution System</p> <p>#11-C, C3.2</p>	<p>The building's two York air handling units exhibit noticeable signs of disrepair. Both systems were installed during the 1990 renovation project and show the deterioration expected of 28 year old units.</p>				
<p>#11-C, C3.3</p>	<p>The cooling system implements 8 unit ventilators and 10 fan coil units scattered throughout the library. These units are old and in many cases original to the building. However, all still appear in adequate physical and mechanical condition.</p>				



Chevy Chase Library - Facility Assessment

#11-C, C3.4					
Recommendations:	<p>The building's air handling units are rapidly deteriorating and are recommended for immediate replacement. New air handling units should be constructed of 1-inch double-wall casing, MERV-13 filters and equipped with ECM motors for energy efficiency. Since the library contains a large number of FCUs and UVs, they require individual maintenance as needed. However, as a whole, these units should be replaced in the coming years and do not pose an immediate concern. All new units shall have stand-alone BACNet DDC controls and actuators. In addition, AHU's and UV's serving the Basement Level should be equipped with humidity sensors and reheat capability to address the smell of mustiness in the Basement Level. Further breakdown of exact replacement requirements can be found in category C3 of the cost estimate.</p>				
#11-C, C5.1 Exhaust / Relief Air System	<p>Exhaust fan EF-3 possessed no visible manufacturer tag but is believed to be original to the building. This unit displayed noticeable signs of aging.</p>				

Chevy Chase Library - Facility Assessment

#11-C, C5.2	Exhaust fan EF-4 was installed during the 1990 renovation project but still appeared in sufficient mechanical condition.	 A photograph of a metal exhaust fan unit, model AX63, with a handwritten label 'BELT - (1) AX63' on its side. The unit is mounted on a wall and has a white flexible duct connected to its bottom.			
#11-C, C5.3	Supply fan SF-6 is a Penn Ventilator Co. unit dating back to the 1990 renovation project. This fan still operates as intended and is in good working order.	 A photograph of a large, cylindrical metal supply fan unit, model SF-6, mounted on a wall. The unit has a white flexible duct connected to its top.		X	
#11-C, C5.4	Exhaust fan EF-7 is a Penn Ventilator Co. unit dating back to the 1990 renovation project. This fan still operates as intended and is in good working order.	 A photograph of a large, cylindrical metal exhaust fan unit, model EF-7, mounted on a wall. The unit has a white flexible duct connected to its bottom. A handwritten label 'EF-7' is visible on the side.		X	

Chevy Chase Library - Facility Assessment

Recommendations:	All the fans present throughout the building proved to be in adequate working condition and do not require immediate replacement. However, due to dwindling service life, these units should be replaced during the next system renovation. New fans shall utilize ECM motors for improved motor efficiency. Further breakdown of exact replacement requirements can be found in category C5 of the cost estimate.				
#11-C, C6.1 Water Distribution System	The system implements two circulating pumps of different motor sizes, a 5 HP and a 10 HP motor. The pumps appear to be in satisfactory working condition. However, equipment tags indicated 1992 as the newest unit production date.		X		
#11-C, C6.2	The heating system's piping was updated during the 1990 building renovation. These pipes seemed functional and showed no major leaks.		X		
Recommendations:	The system's circulating pumps and corresponding pipes and valves are aging but retain adequate operation. The shortcomings of the 2-pipe system could be contributing to the musty smell in the basement due to lack of dehumidification when chilled water is not available. These components and system should be updated to provide improved temperature control during the shoulder seasons and, most importantly, dehumidification capability during times of high humidity. Further breakdown of exact replacement requirements can be found in category C6 of the cost estimate.				

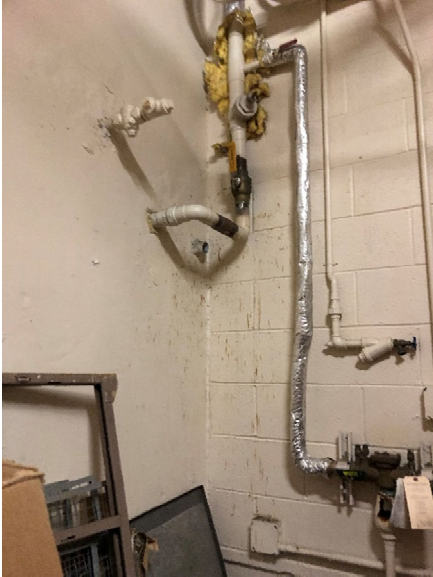
J-Appendices:

Section-12





Plumbing Systems: Image Tabulation

Appendix 12

D. Plumbing Systems: Image Tabulation

Equipment or System	Description	Image	Timeline		
			Immediate	Necessary	Extended
#12-D, D1 Domestic Water Supply and Distribution	Existing 2" incoming water service without backflow preventer.		●		
Recommendations:	<ul style="list-style-type: none"> • New 2-inch Double Check Valve Assembly (DCVA, ASSE 1015) on the incoming water service. Class 1 recommendation. • Replace all existing domestic water piping throughout the entire structure. Extended renovation category (Class 3, 36-72 months) and may be undertaken in segments based on other renovations planned for the library. 				

Chevy Chase Library - Facility Assessment

<p>#12-D, D2</p> <p>Domestic Hot Water Heating System</p>	<p>The existing gas fired domestic water heater is outdated and inefficient.</p>				
	<p>Water heater temperature setting at “Low” limits the temperature desired at staff pantry</p>				
<p>Recommendations:</p>	<ul style="list-style-type: none"> • A new condensing gas fired water heater is recommended for replacement of the existing unit within the basement. The unit should be supplied with all new trim, valves, and controls. • Adjusting the water heater setting to “HOT” is recommended in order to increase the output temperature of the water heater. 				

#12-D, D3

**Thermostatic
Mixing Valves**

Currently there are no mixing valves installed at the source (ASSE 1017) or at the individual fixtures (ASSE 1070).

**Recommendations:**

- As per current code a master mixing valve (ASSE 1017) is required on systems implementing a recirculating pump. This would require a 1-inch inlet/outlet thermostatic mixing valve to be installed at the hot water heater in the basement.
- For public handwashing fixtures, a thermostatic mixing valve (ASSE 1070) is required at the hot water supply to the respective fixture. This valve would prevent temperatures from reaching or exceeding 110°F. The mixing valves would be installed at each lavatory and set at 105°F.

Chevy Chase Library - Facility Assessment

#12-D, D4

Plumbing Fixtures




A variety of plumbing fixtures are installed throughout the library. The existing first floor staff restroom is not ADA compliant and has outdated fixtures.





Existing first floor pantry sink.






Chevy Chase Library - Facility Assessment

	Existing basement pantry sink				
	Existing basement group restroom is in good condition, however the space and fixtures are not arranged to comply with code and ADA requirements.	 			


Chevy Chase Library - Facility Assessment

	Existing drinking fountain is outdated and does not allow front wheelchair access				
Recommendations:	<ul style="list-style-type: none"> • The first floor staff restroom should be fully renovated with a new toilet and lavatory. Priority Class 1. • Replace first floor pantry sink. Priority Class 2 • Replace basement pantry sink. Priority Class 2 • Replace mop sink. Priority Class 2 • Rearrange and upgrade basement group restrooms for ADA compliance. • Replace existing drinking fountain with new high-low unit and with bottle filler. 				
#12-D, D5 Sanitary Waste	Current force main piping passes ovetop existing electrical panels.				

Chevy Chase Library - Facility Assessment

	Due to the age, pit condition, and current piping configuration, the existing sewage ejector should be replaced.		●		
	Existing mechanical room floor drains				●
Recommendations:	<ul style="list-style-type: none"> • Perform dye test to determine exactly which fixtures are draining into the ejector basin. • Remove and replace existing ejector pumps (duplex) along with new controller, discharge piping, and sump basin. • Reroute force main from ejector pump to avoid electrical panels. • Connect new force main to the gravity sewer in the crawl space. 				
#12-D, D6 Storm Drainage System	To ensure good rainwater flow through the storm piping, a hydro-jet flush of the piping system is recommended.		●		

Chevy Chase Library - Facility Assessment

	<p>The north patio would utilize a new sump pump to pick up perimeter/foundation drainage system</p>				
<p>Recommendations:</p>	<ul style="list-style-type: none">• Jet cleaning of the existing underground storm sewer is recommended. This is a Priority Class 1 recommendation.• Refer to the architectural portion of this report for proposed upgrades to the downspouts and gutters.• To coincide with the architectural recommendation of the north patio canopy, any provided gutter or downspout would be connected to a new cast iron boot which would tie to the site gravity storm sewer.• To coincide with the perimeter landscape and pavement upgrades as outlined in the architectural portion of this report, a new area and planter drain would be provided at the podium/ramp.• To coincide with the storefront upgrades listed in the architectural portion of this report, a new scupper or gutter system would be provided with a downspout and tie into the site storm sewer.• A new 3-foot diameter, 5-feet deep sump basin and duplex pumps at the north patio with controller and discharge piping connected to the gravity storm sewer. This is a Priority Class 2 upgrade.				



J-Appendices:

Section-13




Electrical Systems: Image Tabulation

Appendix 13





E. Electrical Systems: Image Tabulation

Equipment or System	Description	Image	Timeline		
			Immediate	Necessary	Extended
#13-E, E1.1 Primary Electrical System	Electrical Distribution System: Considering the age of the incoming electrical service (~50 years) with no known upgrade, we strongly recommend that the electrical incoming service and associated distribution system to be replaced.		●		
#13-E, E1.2	Distribution panels are beyond their life expectancy and are recommended to be replaced.		●		

Chevy Chase Library - Facility Assessment

<p>#13-E, E2.1</p> <p>Emergency Power System</p>	<p>Emergency lighting system currently fed from the existing panel "EM," which is tapped off of the C/T cabinet via a service rated disconnect switch: Exceeded its life expectancy and is recommended to be replaced.</p>		<p>●</p>		
<p>#13-E, E3.1</p> <p>Lighting System and Controls</p>	<p>Surface mounted lighting in the Library controlled through manual override switches.</p>				<p>●</p>
<p>#13-E, E3.2</p>	<p>Parabolic 2x4 recessed lighting in renovated office controlled through manual override switches.</p>				<p>●</p>
<p>Recommendations:</p>	<p>While the existing lighting system is in good operational condition, LED lighting shall be considered as the basis of design for all future fixtures in order to enhance energy savings. Existing controls to be demolished and provide automatic control including occupancy and daylight sensors. An occupancy sensor control system will be used with manual override switches to control all interior non-emergency light fixtures in the building. Further breakdown of exact replacement requirements can be found in category E3 of the cost estimate.</p>				

Chevy Chase Library - Facility Assessment

#13-E, E5.1 Exterior Lighting and Control	Wall mounted exterior lighting.				
#13-E, E5.2	Pole mounted lighting for parking lot.				
Recommendations:	Since the majority of the building mounted and all of the pole mounted fixtures appear to be original to the building, we are recommending they be replaced with more efficient LED exterior fixtures. Further breakdown of exact replacement requirements can be found in category E5 of the cost estimate.				



J-Appendices:

Section-14


Fire Prevention Systems: Image Tabulation


Appendix 14

F. Fire Protection Systems: Image Tabulation

Equipment or System	Description	Image	Timeline		
			Immediate	Necessary	Extended
#14-F, F1.1 Fire Alarm System	Fire Alarm Control Panel in the Basement mechanical/electrical room				
	Combination of Audio and Visual fire alarm devices that are in good condition.				

Chevy Chase Library - Facility Assessment

#14-F, F1.3					
Recommendations:	The existing fire alarm system, including the notification and signaling devices, are in good condition. Further assessment is required to determine whether the existing fire alarm wiring should be upgraded. Exact recommendations of replacement requirements can be found in category F1 of the cost estimate.				

Equipment or System	Description	Image	Timeline		
			Immediate	Necessary	Extended
#14-F, F2 Sprinkler System	Existing 2" incoming water service without backflow preventer.		●		

Chevy Chase Library - Facility Assessment

Recommendations:	<ul style="list-style-type: none">• Provide a new 4-inch fire service• A 4-inch backflow preventer (DCDA – ASSE 1048) would be installed on the new incoming service• Full wet/automatic sprinkler system throughout the entire structure.• Anticipate 2 wet sprinkler zones (basement and first floor)• Anticipate 1 dry sprinkler zone (attic)• System shall be supervised by a central fire alarm system.• A riser-mount air compressor installed in the basement mechanical room to maintain pressure for the dry system.
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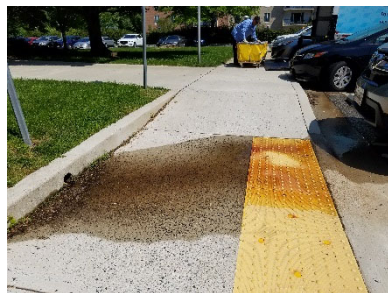
J-Appendices:

Section-15



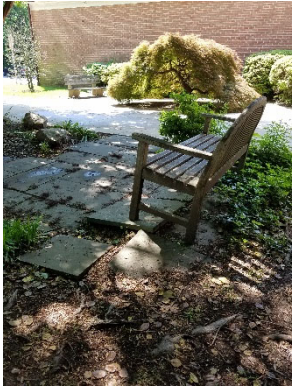



Site Conditions: Image Tabulation

Appendix 15

G. Site Conditions: Image Tabulation

Location Identity: Site Conditions					
Building Facade & Category ID.	Image	Description	Immediate	Necessary	Extended
#15-G, G1. Parking lot Asphalt Surface		Cracks appearing on the parking lot asphalt surface.	●		
Recommendation	Re-seal or refinish to resolve issue.				
#15-G, G2. Site Lighting		Exterior lamp post old.			●
Recommendation	Re-finish existing lamp post and fixture with new paint coat. Alternately replace exiting with new energy efficient lamp fixture.				
#15-G, G3a. Sidewalks & Curb Cuts		Sidewalks & Curb Cuts Note: Stormwater released to sidewalk/curb cut. Water ponding may cause slippery condition to library user.	●		
Recommendation	Replace curb cuts and sidewalks to meet ADA code compliance. Relocate storm water drainage pipe.				

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<p>#15-G, G3b.</p> <p>Sidewalks & Curb Cuts</p>		<p>Cracked, worn out and none ADA compliant sidewalks present at site.</p>			
<p>Recommendation</p>	<p>Replace sidewalks, curb cuts in the building perimeter and parking area.</p>				
<p>#15-G, G4.</p> <p>Site Paving & Seating</p>		<p>Old exterior courtyard seating. Exterior courtyard paving has moved. Seating placed on uneven paved surface.</p>			
<p>Recommendation</p>	<p>Repave area to create a flat paved surface, providing consideration to tree root growth.</p>				
<p>#15-G, G5.</p> <p>Wood Plant Bed</p>		<p>Wood plant bed surrounding tree.</p>			
<p>Recommendation</p>	<p>Large tree has outgrown plant bed. Remove wood edging. Recommend providing new landscape in the surrounding area.</p>				


J-Appendices:

Section-16



Special Areas: Image Tabulation

Appendix 12


H.1. Special Area: Image Tabulation

Space Identity: Room #G102. Restroom - Female					
RM # & Architectural System	Image	Description	Timeline		
			Immediate	Necessary	Extended
#12-H.1, G102-A5. Interior Partitions		Wall tile joint cracked.	●		
Recommendation	Re-finish wall tile joint. Recommend redesigning restroom to meet ADA.				
#12-H.1, G102-A7a. Doors / entranceways		Door requires push plate.	●		
Recommendation	Install new stainless steel push plate.				
#12-H.1, G102-A7b. Doors / entranceways		Door requires new finish.	●		
Recommendation	Clean and re-finish existing door finish.				







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#12-H.1, G102-A13a. Miscellaneous Hazards / inefficiencies		Toilet paper dispenser.	<input checked="" type="radio"/>		
Recommendation	Secure existing toilet paper dispenser to wall, as part of regular maintenance item.				
#12-H.1: G102-A13b. Miscellaneous Hazards / inefficiencies		Insufficient odor exhaust in female restroom.	<input checked="" type="radio"/>		
Recommendation	Installing exhaust fan in restroom.				

Space Identity: Room #G103. Restroom - Male

RM # & Architectural System	Image	Description	Timeline		
			Immediate	Necessary	Extended
#12-H.1: G103-A7. Doors / entranceways		Door requires push plate. Insufficient odor exhaust in male restroom.	<input checked="" type="radio"/>		
Recommendation	Suggest installing new stainless steel push plate. Refinish door. Installing exhaust fan in restroom.				

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#12-H.1, G103-A8a. Ceilings & soffits		Chipped and cracked ceiling tiles.			
Recommendation	Investigate cause and fix issue. Replace stained tiles with new to match adjacent ceiling tile type, color and finish. Recommend redesigning the restrooms to meet ADA and resolve other existing issues.				
#12-H.1, G103-A8b. Ceilings & soffits		Inconsistent ceiling tile size.			
Recommendation	Replace existing mismatched ceiling tile with full 2x4 inch tile.				
#12-H.1, G103-A8c. Ceilings & soffits		Stained ceiling tiles.			
Recommendation	Investigate cause and fix issue. Replace stained tiles with new to match adjacent ceiling tile type, color and finish. Recommend redesigning the restrooms to meet ADA and resolve other existing issues.				



J-Appendices:

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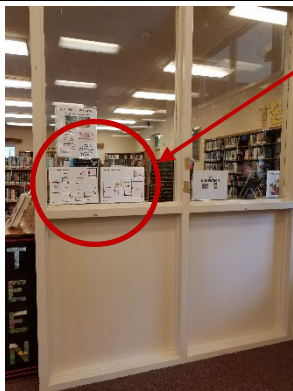
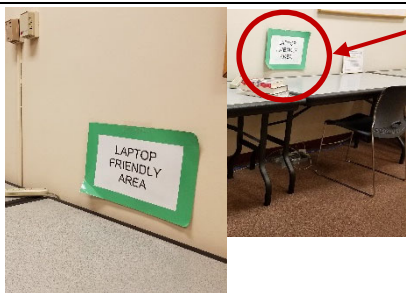

Signage and Display Areas: Image Tabulation

Appendix 17


I.1. Miscellaneous Components: Image Tabulation - Signage

Space Identity: Building Exterior Signage					
Location	Image	Description	Timeline		
			Immediate	Necessary	Extended
#17-I, I1.1 Signage Building West		Library sign not fully visible from the main road.			●
Recommendation:	Trim the tree branches. Suggest moving the sign away from the large tree and placing mid-point on grass median.				
#17-I, I1.2 Signage Building West		Building mounted signage not visible.			●
Recommendation:	Relocate exterior signage to new location on west façade.				



Space Identity: Building Interior Signage

Location	Image	Description	Timeline		
			Immediate	Necessary	Extended
#17-I, I1.3 Signage Building Interior		Life safety and egress signage not prominently visible. Note: Consistant throughout building.	●		
Recommendation:	Redesign and reconsider signage mounting locations.				
#17-I, I1.4 Signage Building Interior		Interior signage. Note: Consistant throughout building.	●		
Recommendation	Replace temporary signage with coherent and consistent graphics.				
#17-I, I1.5 Signage Building Interior		Book shelving identity signage.	●		
Recommendation:	Redesign and install book shelving identity signage with coherent and consistent graphics.				



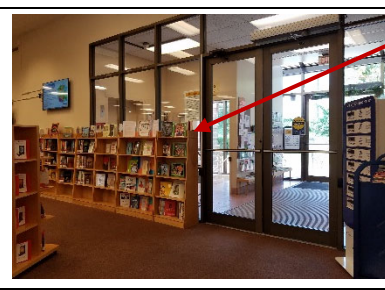

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#17-I, I1.6 Signage Building Interior		Room names and numbers. Note: Currently the existing rooms have no room numbers. Some rooms have no room identification signage.	<div></div>	<div></div>	<div></div>
Recommendation:	Redesign signage with coherent and consistent graphics for the entire facility.				

Space Identity: Building Interior

RM # & Architectural System	Image	Description	Timeline		
			Immediate	Necessary	Extended
#17-I, I2.1 Display Areas		Uncoordinated display surfaces.	<div></div>	<div></div>	<div></div>
Recommendation:	Provide new display surfaces.				
#17-I, I2.2 Display Areas		Display millwork unit is blocking the airflow grille. Visually unpleasing to see added plywood board sandwiched between the grille and storage unit.	<div></div>	<div></div>	<div></div>
Recommendation:	Clear obstructions to mechanical grille. Provide new display surfaces.				

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<p>#17-I, I2.3</p> <p>Display Areas</p>		<p>ADA door activator buttons are blocked by furniture and visibility defused by background display surfaces.</p>	<p>●</p>		
<p>Recommendation:</p>	<p>Re-evaluate display methods and provide unobstructed ADA accessibility to door activator.</p>				
<p>#17-I, I2.4</p> <p>Display Areas</p>		<p>ADA door operator blocked by furniture arrangement.</p>	<p>●</p>		
<p>Recommendation:</p>	<p>Remove furniture obstructions. Reconsider information display areas.</p>				
<p>#17-I, I2.5</p> <p>Display Areas</p>		<p>Visibility blocked.</p>	<p>●</p>		
<p>Recommendation:</p>	<p>Remove furniture obstructions. Reconsider information/book display areas.</p>				
<p>#17-I, I2.6</p> <p>Display Areas</p>		<p>Visibility blocked.</p>	<p>●</p>		
<p>Recommendation:</p>	<p>Remove furniture obstructions. Reconsider information/book display areas.</p>				